The Increasing Cancer Burden: Manitoba Cancer Projections 1999 – 2025

Erich V. Kliewer

André Wajda

James F. Blanchard

June 2001

CancerCare MANITOBA

Dept. of Preventive Oncology
& Epidemiology
CancerCare Manitoba

Epidemiology Unit
Health Information Management
Manitoba Health

Table of Contents

ACKNOWLEDGEMENTS v

SUMMARY v

1. INTRODUCTION 1

2. METHODS 1

2.1 Definitions 1
2.2 Cancer incidence trends and projections 2
2.3 Cancer prevalence 6
2.4 Population projections 6

3. RESULTS 9

3.1 Population projections 9
3.1.1 Manitoba 9
3.1.2 RHA's 12

3.2 Cancer projections 14
3.2.1 Total cancer incidence 14
3.2.2 Total cancer prevalence 16
3.2.3 Site-specific cancer incidence and prevalence 18
3.2.4 RHA cancer incidence and prevalence 24

4. LIMITATIONS 25

5. CONCLUSIONS 26

6. REFERENCES 27

APPENDICES 29

Appendix 1 Map of Manitoba Regional Health Authorities 31
Appendix 2 Actual (1989 – 1998) and projected (1999-2025) cancer incidence by RHA, year and site, Low and High models 33
Appendix 3 Actual (1989 – 1998) and projected (1999-2025) cancer prevalence by RHA, year and site, Low and High models 61

102-00556/

List of Figures

Figure 1	Total cancer incidence rates, males, 60-69	3
Figure 2	Prostate cancer incidence rates, males, 60-69	3
Figure 3	Lung cancer incidence rates, males, 60-69	4
Figure 4	Lung cancer incidence rates, females, 60-69	4
Figure 5	Lung cancer incidence rates, females 40-49	5
Figure 6	Comparison of annual projected population with Statistics Canada and the Manitoba Bureau of Statistics	10
Figure 7	Comparison of age distribution of projected population with Statistics Canada and the Manitoba Bureau of Statistics, 2025	11
Figure 8	Manitoba population age distribution 2000, 2010, 2025 (Current)	12
Figure 9	Projected total cancer incidence in Manitoba, 1999-2025	15
Figure 10	Projected total cancer incidence in Manitoba, 1999-2065 (Current)	15
Figure 11	Projected total cancer prevalence in Manitoba, 1999-2025	16
Figure 12	Projected total cancer prevalence in Manitoba, 1999-2025 (Current)	17
Figure 13	Projected number of new total cancer cases, deaths and net migration, Manitoba, 1999-2025 (Current)	17
Figure 14	Prevalence (%) of total cancer by age, 2000, 2010, 2025 (Current)	18
Figure 15	Projected lung cancer incidence in Manitoba, 1999-2025	19
Figure 16	Projected colorectal cancer incidence in Manitoba, 1999-2025	20
Figure 17	Projected breast cancer incidence in Manitoba, 1999-2025	20
Figure 18	Projected prostate cancer incidence in Manitoba, 1999-2025	21
Figure 19	Percent distribution of total incident cancers by site, 1998 and 2025, (Low)	23
Figure 20	Percent distribution of total prevalent cancers by site, 1998 and 2025 (Low)	23

List of Tables

Table 1	Manitoba's projected population according to four growth scenarios	9
Table 2	Comparison of the 2025 projected population with Statistics Canada	11
Table 3	2025 RHA projected population according to four population growth scenarios and the MBS	13
Table 4	Percent difference in the High scenario and the MBS projected 2025 population aged 60 years of age and over by RHA	14
Table 5	Percent change in cancer incidence and prevalence by site, Low and High models, Manitoba, 1998 – 2025	19
Table 6	Cancer incidence and prevalence by incidence scenario and site (Current population growth model)	22
Table 7	Percent change in cancer incidence (Low-High) by RHA and site, 1998 – 2025	24
Table 8	Percent change in cancer prevalence (Low-High) by RHA and site, 1998 – 2025	25

ACKNOWLEDGEMENTS

We would like to thank Errin Minish, formerly of CancerCare Manitoba, for extracting some of the required cancer data from the Manitoba Cancer Registry. We are also grateful to Anita Desrochers of Manitoba Health's Epidemiology Unit for her assistance in the preparation of the report.

SUMMARY

This report describes the initial methodology and results from the ongoing work on projecting cancer incidence and prevalence in Manitoba to the year 2025. The work is a part of a joint effort between CancerCare Manitoba and Manitoba Health. Data from CancerCare Manitoba's cancer registry and Manitoba Health's hospital and population registry files were used for the projections. For the population projections separate regression lines were calculated for fertility, mortality and migration for various age, sex and Aboriginal status categories for the years 1993-98. For mortality and migration the regression analysis was further broken down to those with and without cancer. Since the greatest instability in rates occurs for migration, population estimates were derived using four different migration scenarios. Linear regression was also used to summarize the trend in age-sex-site specific cancer incidence rates. The future number of incident and prevalent cancer cases were estimated by applying the projected cancer incidence rates to the projected population. For total cancers the results suggest that by the year 2025 the number of incident cases in Manitoba will increase by 45-54% and that prevalence will increase by 75-84%. It is estimated that approximately 5% of Manitobans will be living with cancer in 2025. The prevalence in those 80 years of age and over is projected to be approximately 25%. Of the sites examined, the largest increases will be for prostate cancer, with projected increases in incidence between 128-142% and prevalence between 174-187%. These preliminary results suggest the urgent need for a wide arching cancer control strategy that focuses not only on treatment, but also on prevention and early detection. They also serve as an indication to planners of health services of the ever increasing need for medical staff and facilities for treating the increasing number of cancer patients.

1. INTRODUCTION

Projections of cancer incidence and prevalence are a necessity for the purposes of planning future facility and manpower requirements for cancer treatment. They are also useful in examining the implications of current cancer control strategies and in formulating new policies and strategies. The number of future incident and prevalent cases is a result of a number of factors, including not only future cancer incidence rates and survival rates, but also the underlying growth and age distribution of the population.

The purpose of this report is to describe the model that has been developed by CancerCare Manitoba and Manitoba Health to project cancer incidence and prevalence in Manitoba and to provide projections to the year 2025 for all cancers and for each of the four major sites (lung, breast, prostate, and colorectal).

It should be noted that the projection model is 'work in progress'. As the model is revised, updated projections will be published.

2. METHODS

2.1 Definitions

Incidence rate - the number of new cancer cases among those who do not already have cancer. The rate is expressed as *new cases / population / year*.

Prevalence - the proportion (percent) of the population living with cancer at a given point in time. All people who had ever been diagnosed with cancer, regardless of how long ago, and who were alive and living in Manitoba were included in the prevalence estimate. Therefore, prevalent cases by this definition includes people in remission or cured of cancer.

Mortality rate - the number of deaths in the population. It is expressed as the number of *deaths / population / year*.

2.2 Cancer incidence trends and projections

For the years 1980-1998, age-sex-specific (ages 0-9, 10-19, ..., 70-79, 80+) cancer incidence rates were determined for all cancers (International Classification of Diseases, 9th Revision, ICD-9 140-172,174-208), as well as for colorectal (ICD-9 153,154), lung (ICD-9 162), breast (ICD-9 174) and prostate (ICD-9 185) cancers. Excluded from the projections for total cancers were non-melanoma skin cancers (ICD-9 173), benign and in situ neoplasms, and those of uncertain behaviour or unspecified nature (ICD-9 210-239). The Manitoba Cancer Registry was used to determine the number of incident cancer cases. Statistics Canada's population estimates were used for the years 1980-83. The population data for the years 1984-1998 were derived from the Manitoba Health Population Registry (MHPR), a version of which is maintained by Manitoba Health's Epidemiology Unit. This registry contains information on all people covered by Manitoba's provincial health insurance plan (over 99% of the population). Six-monthly historical snapshots (June 30, December 31) of the MHPR are available from 1984.

For all cancers and for each of the four specific sites, linear regression was undertaken within each age and sex group in order to summarize the trend. The annual estimated age-sex-specific incidence rates from 1999 to 2025 were derived from the regression equations. This is demonstrated in Figure 1 which shows the observed total cancer rates for males aged 60-69 for 1980-98 and the estimated trends for all cancers to 2004.

For prostate cancer a similar procedure was followed, except only observed incidence rates for the years 1980-89, 1997 and 1998 were used to estimate the regression equation. This was done in order to exclude the abnormal change in incidence that was observed with the introduction of the prostate specific antigen (PSA) test (Figure 2).

It was decided to calculate age-sex-specific regression equations, as the observed trends were often different between age groups and between males and females. For example, within the 60-69 year age group the lung cancer incidence rates were decreasing for men (Figure 3) but increasing for women (Figure 4). In contrast, for women aged 40-49 the lung cancer incidence rates were decreasing (Figure 5). For any negative predicted rates, an incidence rate of zero was used.

Figure 1.
Total cancer incidence rates, males, 60-69

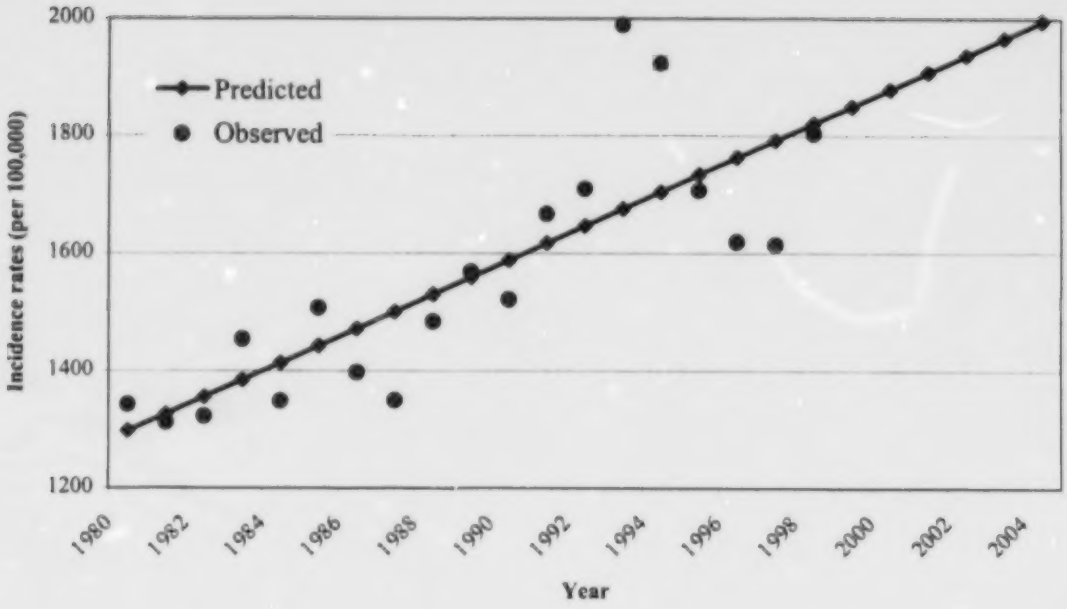


Figure 2.
Prostate cancer incidence rates, males, 60-69

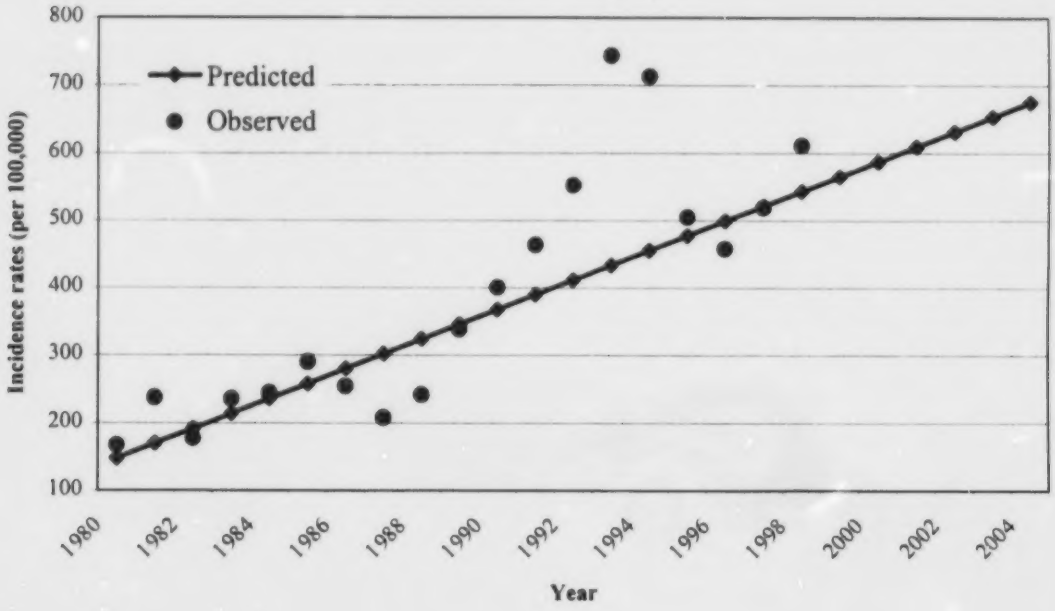


Figure 3.
Lung cancer incidence rates, males, 60-69

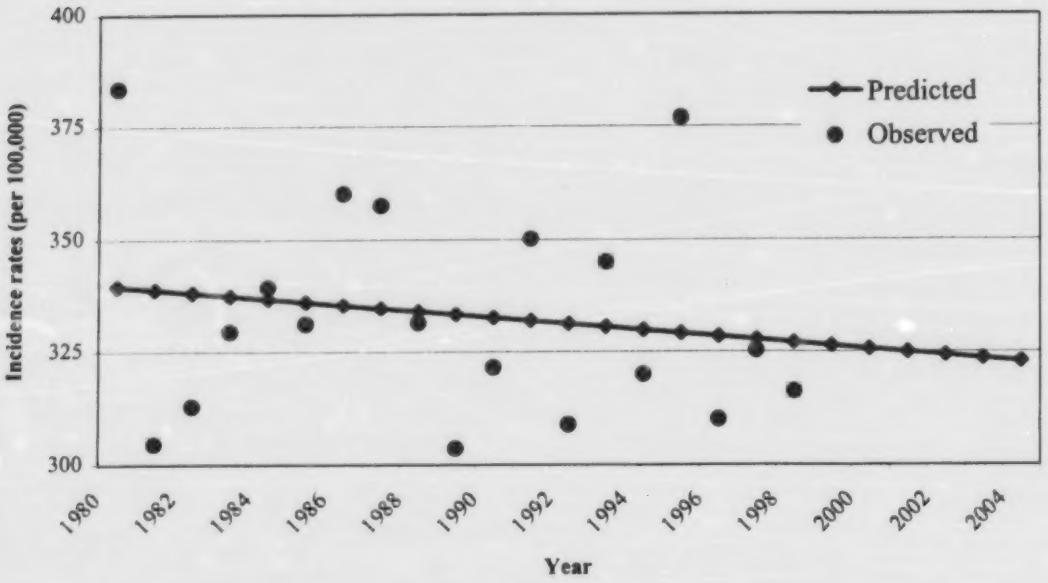


Figure 4.
Lung cancer incidence rates, females, 60-69

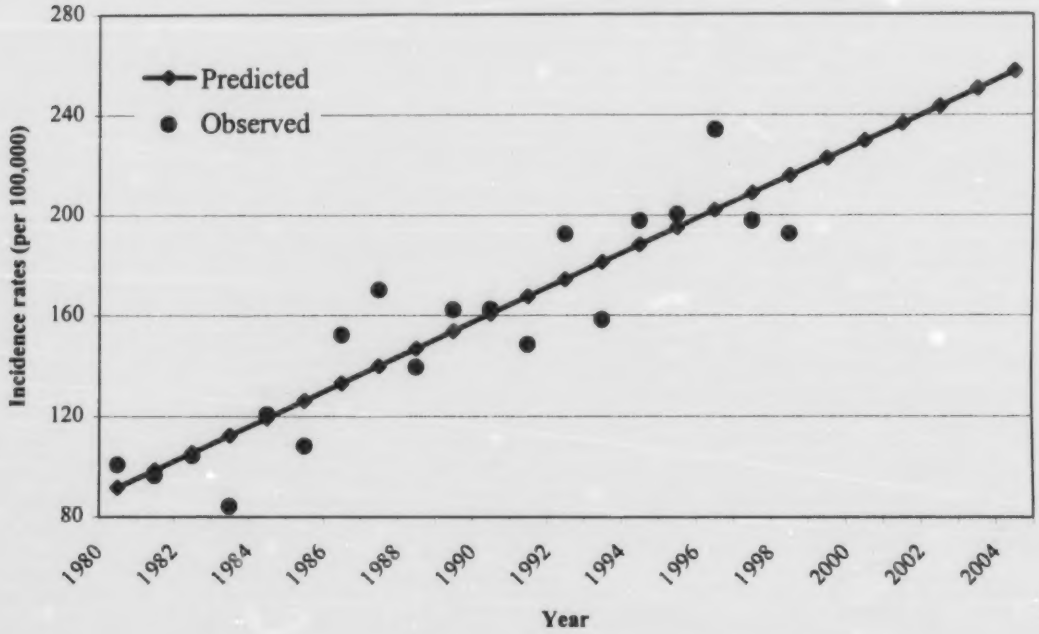
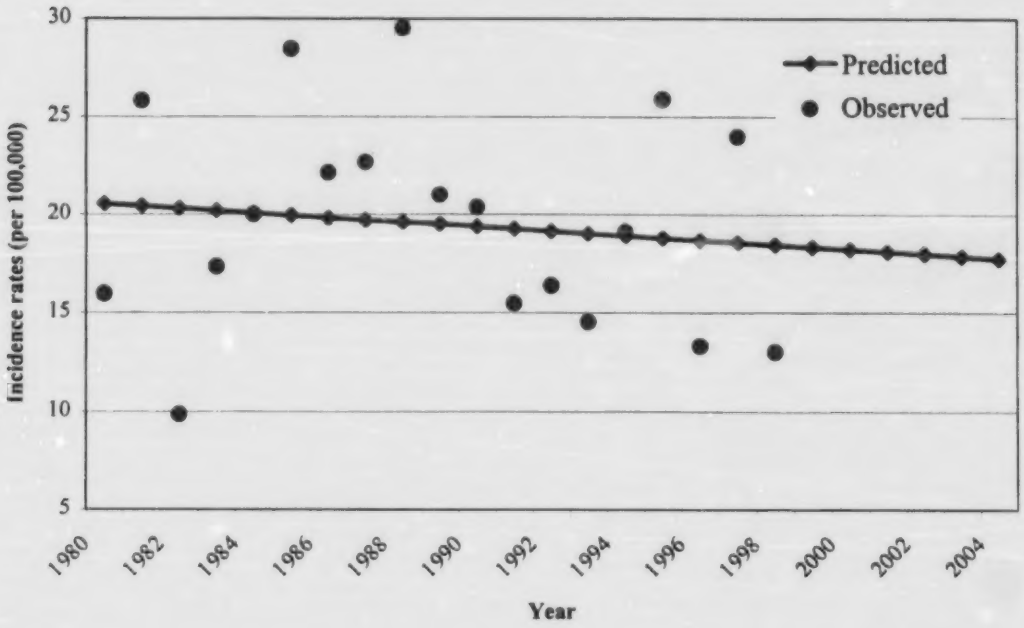


Figure 5.
Lung cancer incidence rates, females, 40-49



Due to the small number of cancer cases it was not possible to develop reliable age-sex-specific incidence rate projections for each of the Regional Health Authorities (RHAs). The assumption was made that the RHAs have the same trends in incidence rates as Manitoba as a whole. However, since the current incidence rates vary among the RHAs, we adjusted the projected Manitoba age-sex-site-specific incidence rates for each RHA. This adjustment consisted of multiplying the Manitoba projected age-sex-site-specific incidence rates by the ratio of the RHA to Manitoba age-standardized rates for the period 1984-98. These adjusted age-sex-site-specific incidence rates were then applied to the projected population data of each RHA in order to determine the number of new cancer cases for each site. As a result of this methodological approach, differences in future trends of cancer burden between RHAs reflect differences in the current cancer incidence and mortality rates and differences in the projected population structures. Thus, those RHAs that currently have higher overall cancer incidence and mortality rates are expected to have higher rates in the future.

2.3 Cancer prevalence

The MHPR, which covers virtually all Manitobans, includes information on when medical coverage was terminated, be that through out-migration or death. As such, it is possible to define the number of people living in Manitoba who at some point had been diagnosed with cancer. For the purposes of the prevalence calculations, all people who had ever had a diagnosis of cancer (ICD-9 140-172, 174-208) and who were alive as of December 31, were included in the estimates.

2.4 Population projections

The future size of Manitoba's population and its age-sex composition need to be estimated in order to project the number of new and prevalent cancer cases. Population growth is determined by three factors: fertility, mortality and migration. It is possible to determine estimates for each of these components using information held by Manitoba Health in their hospital discharge database and the MHPR. All births to Manitoba women, with the exception of approximately 200 per annum occurring out of hospital, are recorded in the hospital discharge records. The MHPR was used to determine the number of in- and out-migrants and deaths.

For each of the three components, separate regression equations were calculated for various population subgroups in order to summarize the trends in rates. The specific categories for which separate regression equations were estimated were:

Fertility: mother's age by Aboriginal status by RHA
Mortality: age by sex by Aboriginal status by cancer status
Migration: age by sex by Aboriginal status by cancer status

For fertility, mother's age was broken down into five-year categories, but restricted to ages 15-44. For mortality and migration age was broken down into ten-year categories (0-9, 10-19, ..., 70-79, 80+). The assumption was made that within each of the age groups the rates were the same for each of the individual ages. Aboriginal status was determined using the A-codes which

depict Band number and are in the MHPR. By linking the cancer registry to the MHPR we were able to differentiate those people with and without cancer.

For fertility and mortality, regression equations were calculated based on the actual rates for the period 1993-98 and the assumption was made that the estimated rates for 1998 derived from the regression equations were constant from 1999 until 2025. Although for fertility separate regression equations were calculated for each RHA, for mortality the assumption was made that the Manitoba rates applied to each RHA.

For migration, a regression line was calculated based on only five years of data (1993-96, 1998). In 1997 Manitoba had a high net loss of people. We believe this was related to the major flood that Manitoba experienced that year and, as such, represented an abnormal year. Therefore, 1997 was excluded. In order to derive an estimate of migration for the RHAs, the projected Manitoba age-sex-Aboriginal status-cancer status rates were multiplied by the ratio of the RHA to Manitoba crude migration rates for the years 1993-96, 1998.

In Manitoba fertility and migration have the greatest impact on population growth. Since cancer tends to be a disease of the elderly, the fertility component will have little impact on cancer incidence or prevalence in the year 2025. Furthermore, the greatest instability in rates occurs for the migration component. We therefore concentrated on migration and derived population estimates based on four different migration scenarios.

1. **Current** trend: This model uses the 1998 migration estimates derived from the regression analysis of 1994-96, 1998 actual migration data.
2. **Low**: Assumes in-migration estimates from the 'Current' model are 3% lower and out-migration 3% higher.
3. **Medium**: Assumes in-migration estimates from the 'Current' model are 3% higher and out-migration 3% lower.
4. **High**: Assumes in-migration estimates from the 'Current' model are 5.5% higher and out-migration 5.5% lower.

These four migration scenarios were applied equally across each age, sex, Aboriginal status and cancer status group.

This population projection model is unique in that it takes into account Aboriginal status for all three components of population growth and cancer status for mortality and migration. Manitoba has a large Aboriginal population (approximately 100,000). They have substantially higher fertility and mortality rates than the non-Aboriginal population. Without this enhancement, the fertility and mortality rates in RHAs with a large Aboriginal population would be under-estimated. Although the MHPR identifies only approximately 65% of the Aboriginal population, it was felt that even this proportion provided a refinement of the population estimates.

The linked MHPR and Manitoba Cancer Registry allowed for separate estimates of mortality and migration among people with and without cancer. Mortality rates are higher among people with cancer, and there is a general belief that people with cancer migrate to larger communities in order to be closer to treatment facilities. Future versions of the model will take into account inter-RHA migration patterns.

The starting point for the population projection was the January 1, 1999 population, disaggregated by RHA, Aboriginal status, cancer status, age and sex. The projection for Manitoba as a whole excluded the RHA breakdown. The appropriate estimated fertility, mortality, migration and cancer incidence rates were applied to each of the population groups. The resulting population was then aged one year and the process repeated.

3. RESULTS

3.1 Population projections

3.1.1 Manitoba

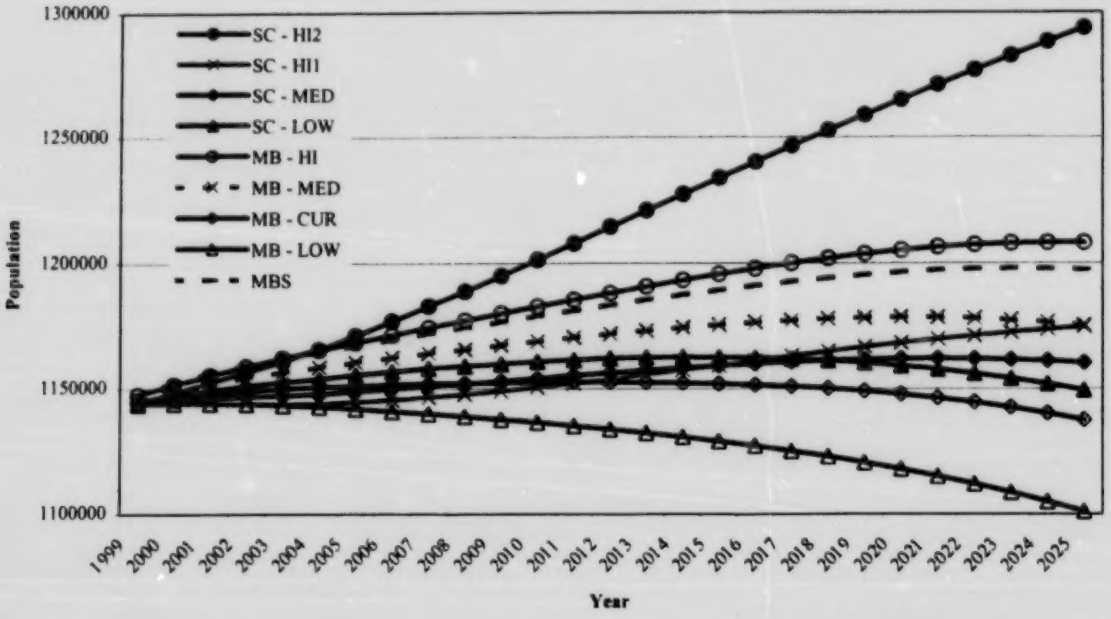
The projected population for Manitoba for the years 2000, 2010 and 2025 under the four scenarios is shown in Table 1. The Low scenario will result in a 3.8% loss in population between 2000 and 2025, while the High scenario will result in a 4.9% gain. If Manitoba's population did change according to the High scenario, by the year 2025 there would be approximately 107,000 more people (9.7%) than if it changed according to the Low scenario.

In 1999, both Statistics Canada (SC) and the Manitoba Bureau of Statistics (MBS) also developed population projections for Manitoba (1,2). Figure 6 compares our annual projected population to those of these two agencies.

Table 1.
Manitoba's projected population according to four growth scenarios

Scenario	2000	2010	2025	% change 2000-2025
Low	1,144,086	1,136,413	1,100,979	-3.8
Current	1,146,713	1,152,563	1,137,469	-0.8
Medium	1,149,345	1,168,973	1,175,325	2.3
High	1,151,540	1,182,851	1,207,953	4.9
% Diff Low – High	**0.7**	**4.1**	**9.7**	

Figure 6.
Comparison of annual projected population with Statistics Canada and the Manitoba Bureau of Statistics



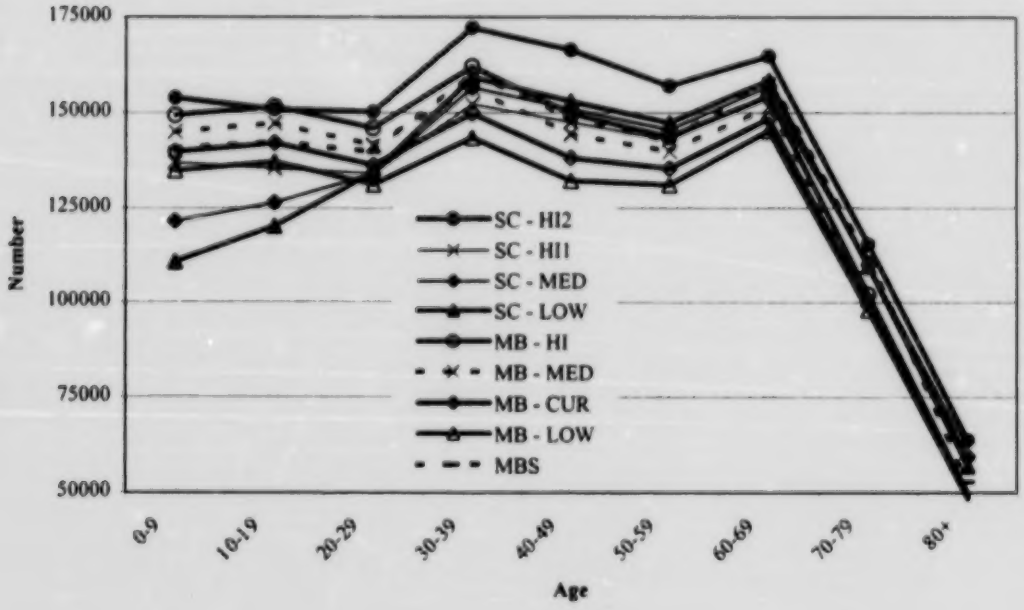
Statistics Canada's High 2 projection was substantially higher than any of our projections and the MBS projection. The other three Statistics Canada scenarios resulted in very similar population projections (only a difference of 2.2% in the 2025 population), and they fell between our Low and Medium projections. Statistics Canada's highest projection was 7.1% higher than our highest and their lowest was 4.4% higher than our lowest (Table 2). The MBS only developed one projection scenario and the resulting 2025 projected population (1,197,311) was between our Medium and High projections. Our Low projection was considerably lower than all the other projections. Thus, with the exception of Statistics Canada's High 2 projection, their other projections as well as that of the MBS fell between our Low and High projections.

Table 2.
Comparison of the 2025 projected population with Statistics Canada

Manitoba		Statistics Canada		
Scenario	**2025 population**	**Scenario**	**2025 population**	**% Diff (SC-MB)**
Low	1,100,979	Low	1,149,387	4.4
Current	1,137,469	Medium	1,160,454	2.0
Medium	1,175,325	High -1	1,174,762	0.0
High	1,207,953	High -2	1,293,689	7.1
% Diff Low – High	**9.7**		**12.6**	

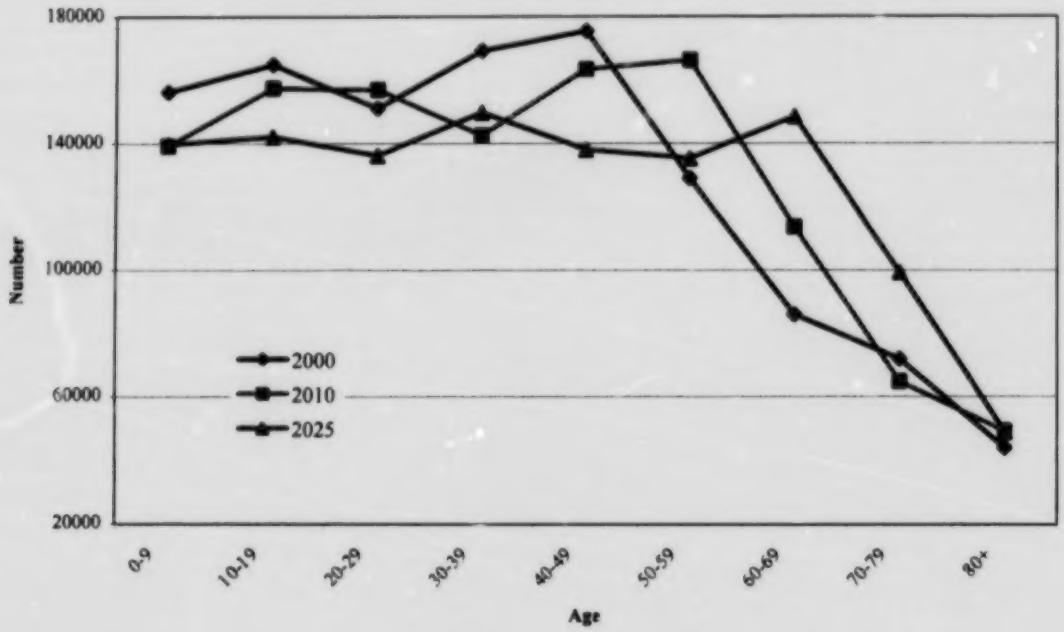
Figure 7 compares the 2025 age distributions of the population projections developed by Statistics Canada and the MBS with those from our models. There was substantial variability between the various models in the younger ages. However, it is important to note that in those ages of high cancer risk (60+ years), all four models had very similar results. Thus, regardless of which population projection model one uses, one would obtain comparable projected cancer incidence and prevalence cases.

Figure 7.
Comparison of age distribution of projected population with Statistics Canada and the Manitoba Bureau of Statistics, 2025



The age distribution of the Manitoba population in the years 2000, 2010 and 2025 based on the Current model is shown in Figure 8. The figure indicates that there will be a substantial aging of the population. By 2025 the number of people aged 60 and over will have increased from 17.6% to 26.1%. Thus, not only will more people be of the age when they are using substantial medical services, but there will also be much fewer younger people available to work and to contribute to the tax base required to pay for these increased services.

Figure 8.
Manitoba population age distribution 2000, 2010, 2025 (Current)



3.1.2 RHAs

The projected 2025 population for each of the RHAs based on the four projection scenarios is provided in Table 3. For purposes of comparison, the MBS projections are included in the Table as well.

Table 3.
2025 RHA projected population according to four population growth scenarios and the MBS

RHA \ Scenario	Low	Current	Medium	High	MBS	% Diff[1]
Winnipeg	603,423	624,108	645,575	664,085	611,011	-8.0
Brandon	46,010	47,565	49,178	50,568	50,838	0.5
North Eastman	42,195	43,458	44,765	45,891	48,627	6.0
South Eastman	55,853	57,773	59,765	61,478	72,386	17.7
Interlake	72,182	74,567	77,042	79,176	88,944	12.4
Central	97,539	100,744	104,066	106,928	110,714	3.5
Marquette	34,069	35,132	36,233	37,181	39,186	5.4
South Westman	29,364	30,324	31,319	32,175	36,800	14.4
Parkland	38,110	39,310	40,555	41,627	44,694	7.4
Norman	25,885	26,761	27,673	28,462	28,507	0.2
Burntwood/Churchill	56,347	57,727	59,155	60,382	65,594	8.6
Manitoba	**1,100,979**	**1,137,469**	**1,175,325**	**1,207,953**	**1,197,311**	**-0.9**

1. MBS-High

With the exception of Winnipeg, the MBS projected population was greater than that from our High scenario in each of the RHAs. The largest difference was for South Eastman, where the MBS projected population was 17.7% higher than that of our highest estimate. For Winnipeg, the MBS estimated population was between our Low and Current estimates.

These differences resulted partly from the fact that the MBS attempted to define mortality at the RHA level, whereas we made the assumption that the Manitoba levels were consistent across each RHA. Also, we used the MHPR to define RHA migration patterns and took into account the Aboriginal and cancer status of the population of each RHA, which the MBS did not do.

As previously noted, people aged 60 years of age and over are at much greater risk of cancer than younger people. We compared our 2025 estimates of the population older than 59 based on the High scenario with those estimated by the MBS (Table 4). For some of the RHAs, particularly Norman and Burntwood/Churchill, the percent differences were very large. If the projections by the MBS are correct, then we will have substantially underestimated the cancer incidence and prevalence in these RHAs.

Table 4.
Percent difference in the High scenario and the MBS projected 2025 population aged 60 years of age and over by RHA

RHA	High	MBS	% Difference[1]
Winnipeg	180,676	188,030	4.1
Brandon	12,907	13,549	5.0
North Eastman	11,980	11,682	-2.5
South Eastman	14,170	15,981	12.8
Interlake	20,939	22,882	9.3
Central	24,315	25,015	2.9
Marquette	10,246	10,427	1.8
South Westman	9,253	9,195	-0.6
Parkland	11,065	11,111	0.4
Norman	4,861	6,234	28.2
Burntwood/Churchill	5,573	9,169	64.5
Manitoba	**305,983**	**323,284**	**5.7**

[1] MBS - High

3.2 Cancer projections

3.2.1 Total cancer incidence

Figure 9 shows the number of projected new cancer cases by year based on the four population growth scenarios. The figure suggests two important features. The first is that the number of new cancer cases will increase dramatically between 1998 (the last year of actual data) and 2025. There will be an estimated increase of between 45% and 54% in incident cases by 2025. Secondly, that the estimates of cancer incidence do not vary much by model. It is estimated that there would only be a difference of 440 cases (5.9%) between the Low and High scenarios.

Since the projections in Figure 9 suggested that the increase in incidence was starting to taper off by 2025, the number of incident cancer cases was projected to 2065 using the Current model (Figure 10). This model suggests that the incidence will continue to increase until 2033 at which point it will be approximately 7,850 cases. This will be followed by only a gradual decline in incidence, with there still being over 7,200 cases in 2065.

Figure 9.
Projected total cancer incidence in Manitoba, 1999-2025

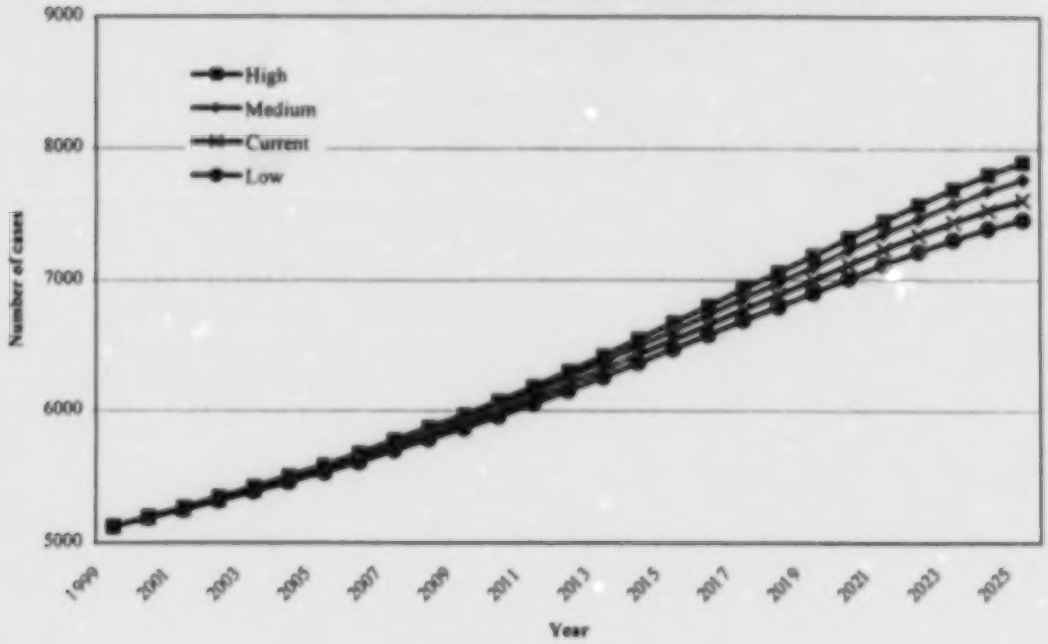
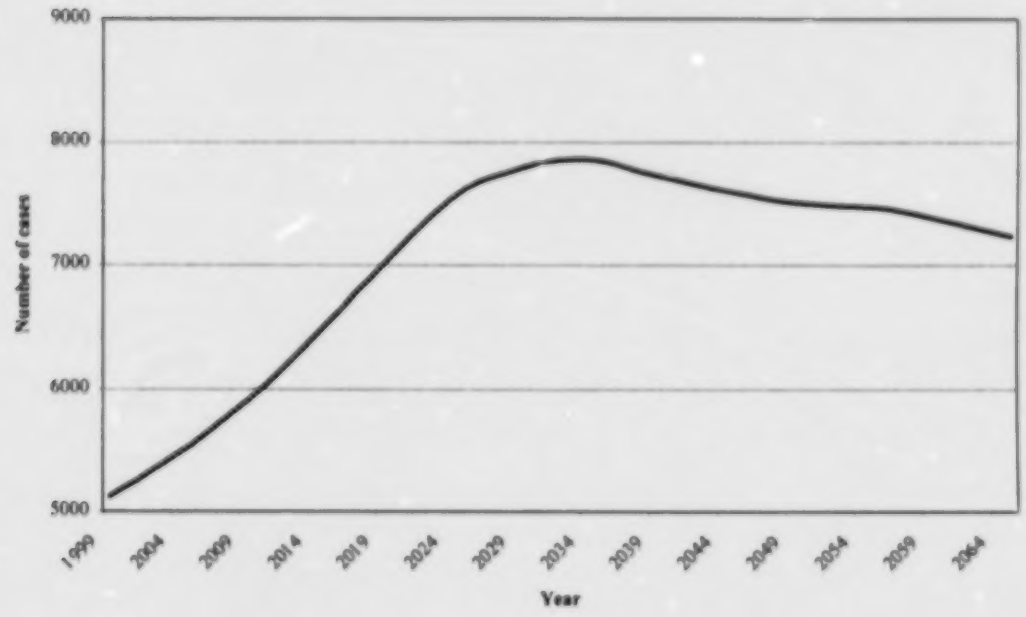


Figure 10.
Projected total cancer incidence in Manitoba, 1999-2065 (Current)

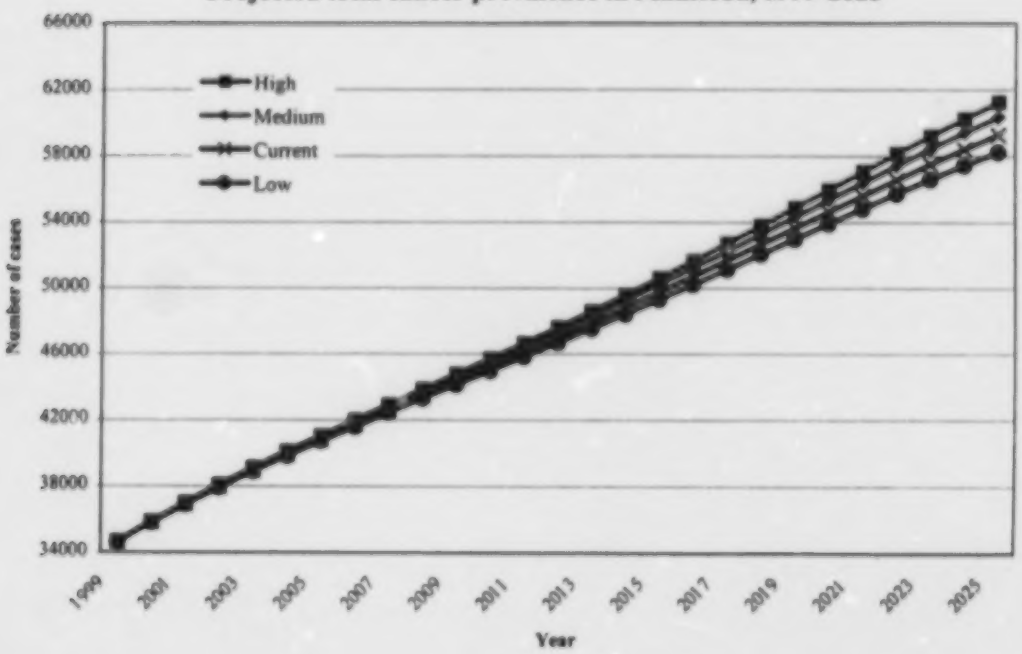


3.2.2 Total cancer prevalence

A similar pattern is observed for cancer prevalence as for incidence (Figure 11). Depending on the model used, prevalence was projected to increase between 75% and 84% by the year 2025. It was estimated that there will be between 58,000 and 61,000 Manitobans living with cancer in 2025.

There was only a 5% difference in the projected prevalence using the Low and High models. All the models indicate that the percentage of the population living with cancer will increase from approximately 3% in 1998 to over 5% in 2025.

Figure 11.
Projected total cancer prevalence in Manitoba, 1999-2025



Based on the Current model, prevalence is projected to peak at 63,800 cases in 2036 (Figure 12). It is estimated that in the subsequent 30 years there will only be a decrease of 5.8% to 60,100 cases.

Figure 12.
Projected total cancer prevalence in Manitoba, 1999-2065 (Current)

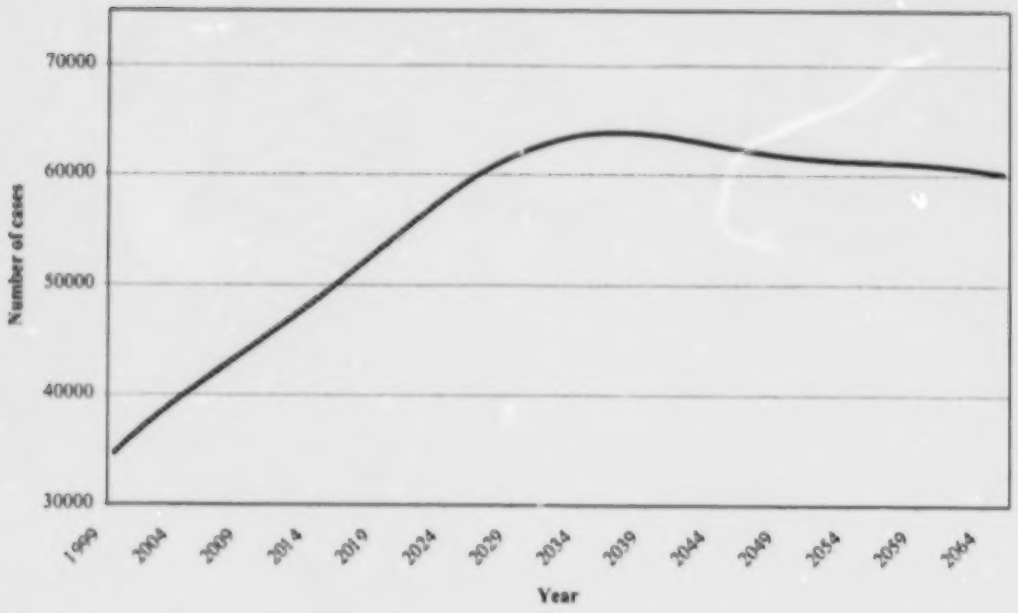
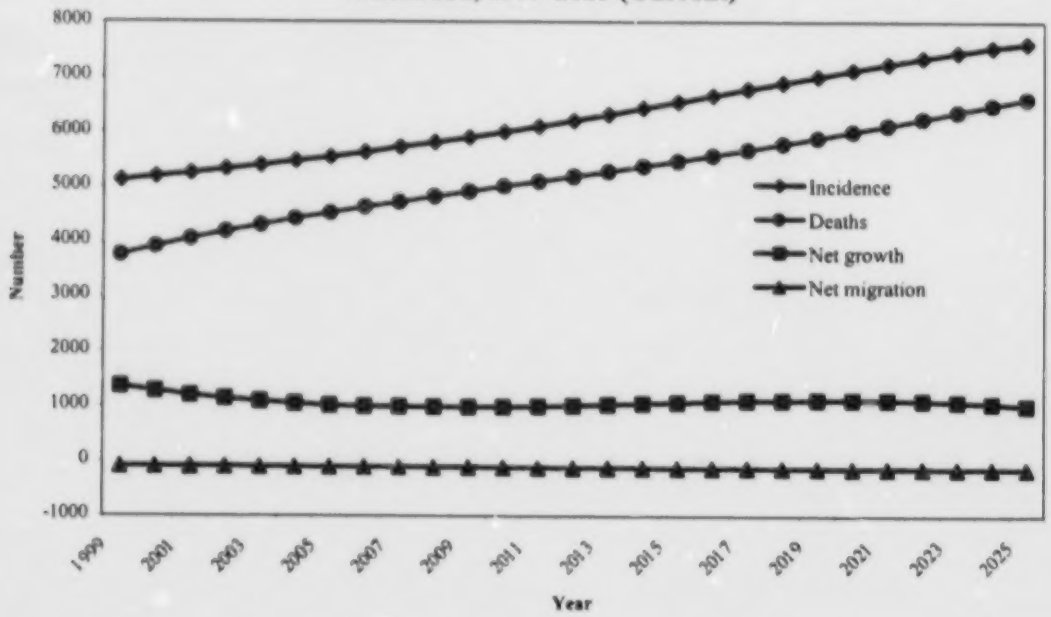


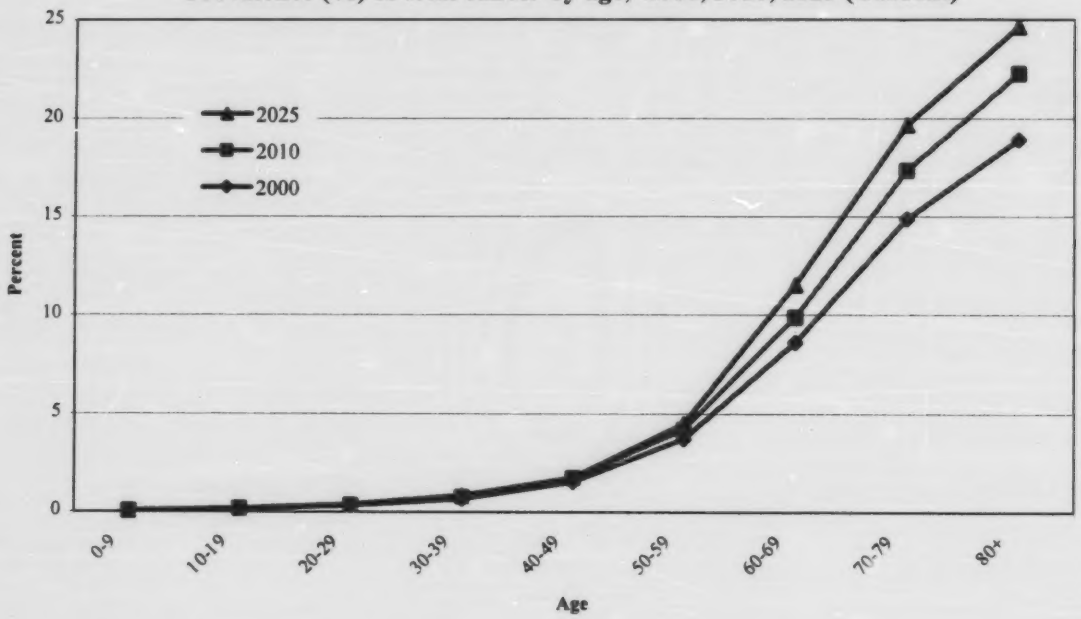
Figure 13.
Projected number of new total cancer cases, deaths and net migration, Manitoba, 1999-2025 (Current)



The components contributing to the increased prevalence are shown in Figure 13. Based on the Current model there will be an increase in both the number of incident cases and deaths from cancer, although, incidence will remain consistently higher than deaths. Out-migration of people with cancer will be slightly higher than in-migration resulting in a net loss. It is estimated that the combination of these factors will result in a net annual increase of approximately 1,000 people in Manitoba living with cancer.

As a result of the aging population, the increased prevalence in 2025 will be concentrated to a much greater degree in the 60+ year age group (Figure 14). In terms of the proportion of people living with cancer, it is estimated that in 2025 prevalence will increase to a high of 25% in those people 80 years of age and over.

Figure 14.
Prevalence (%) of total cancer by age, 2000, 2010, 2025 (Current)



3.2.3 Site-specific cancer incidence and prevalence

Figures 15-18 show the projected incidence in Manitoba for each of the four specific cancer sites. The change in incidence and prevalence between 1998 and 2025 is summarized in Table 5. The largest increase in incidence and prevalence will be for prostate cancer. Prostate cancer

incidence is projected to increase between 128% and 142% and prevalence is projected to increase between 174% and 187%. The lowest increase will be for colorectal cancer, with incidence increasing between 26% and 33% and prevalence increasing between 52% and 59%.

Figure 15.
Projected lung cancer incidence in Manitoba, 1999-2025

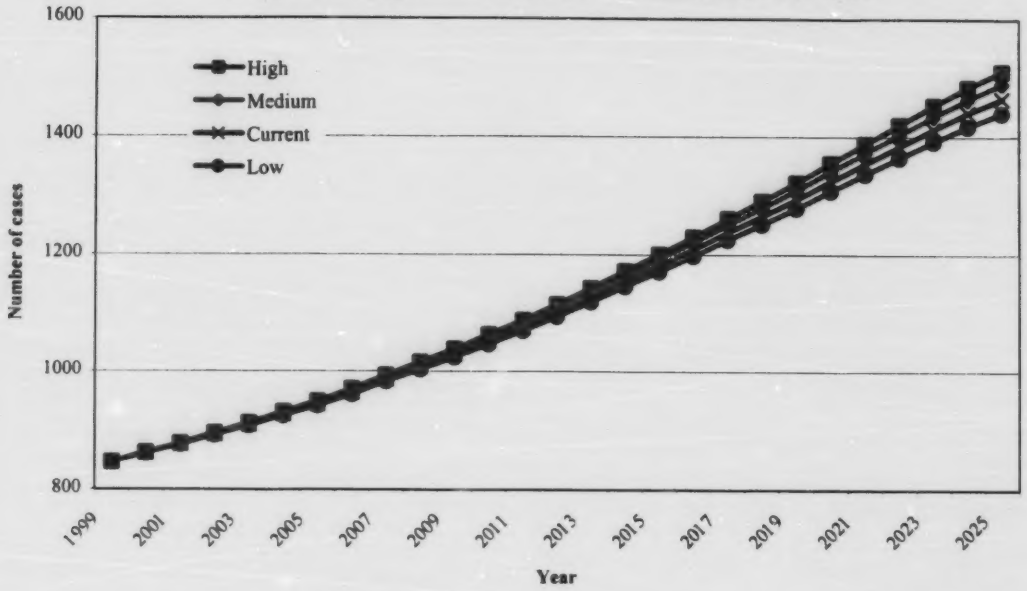


Table 5.
Percent change in cancer incidence and prevalence by site, Low and High models, Manitoba, 1998-2025

	Incidence		Prevalence	
Site	**Low**	**High**	**Low**	**High**
Lung	83.2	92.2	106.4	116.5
Colorectal	26.1	32.9	52.1	58.9
Breast	59.0	68.3	86.7	95.4
Prostate	128.4	141.9	174.4	187.2
Total	**45.2**	**53.7**	**74.6**	**83.6**

Figure 16.
Projected colorectal cancer incidence in Manitoba, 1999-2025

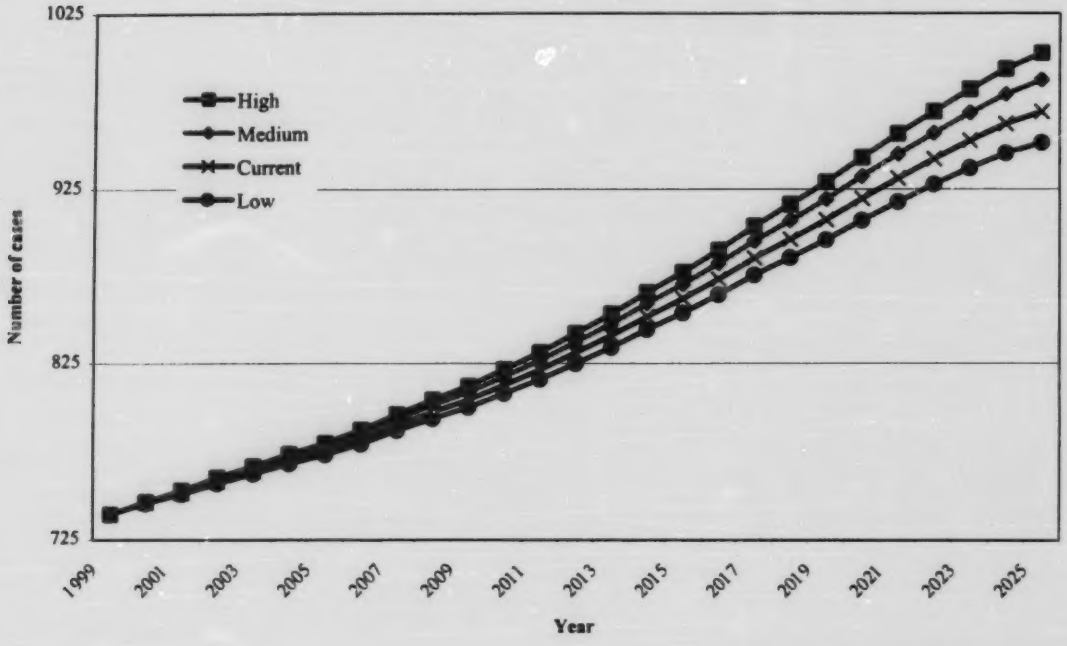


Figure 17.
Projected breast cancer incidence in Manitoba, 1999-2025

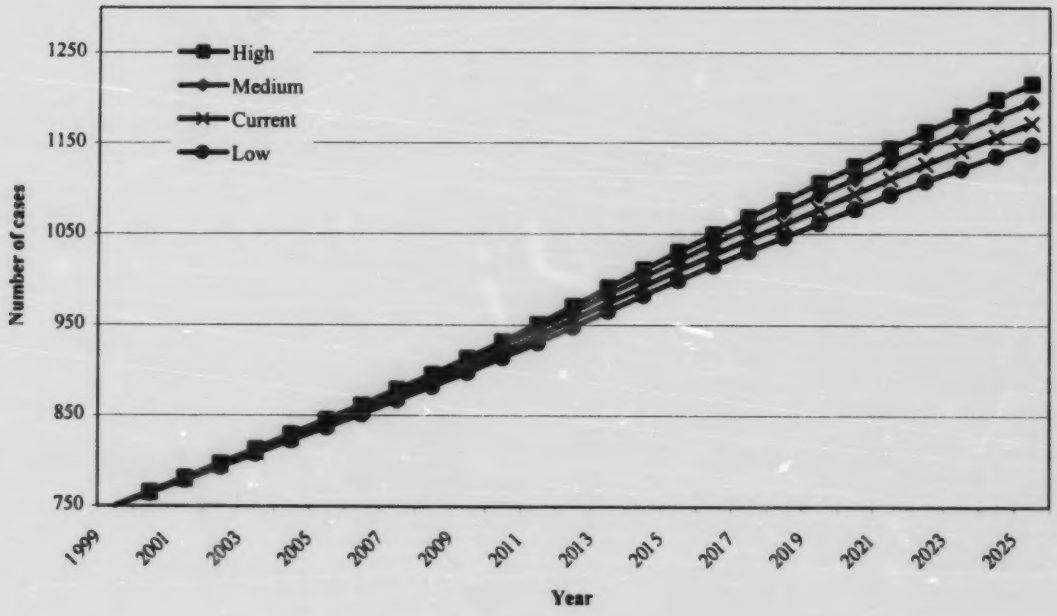
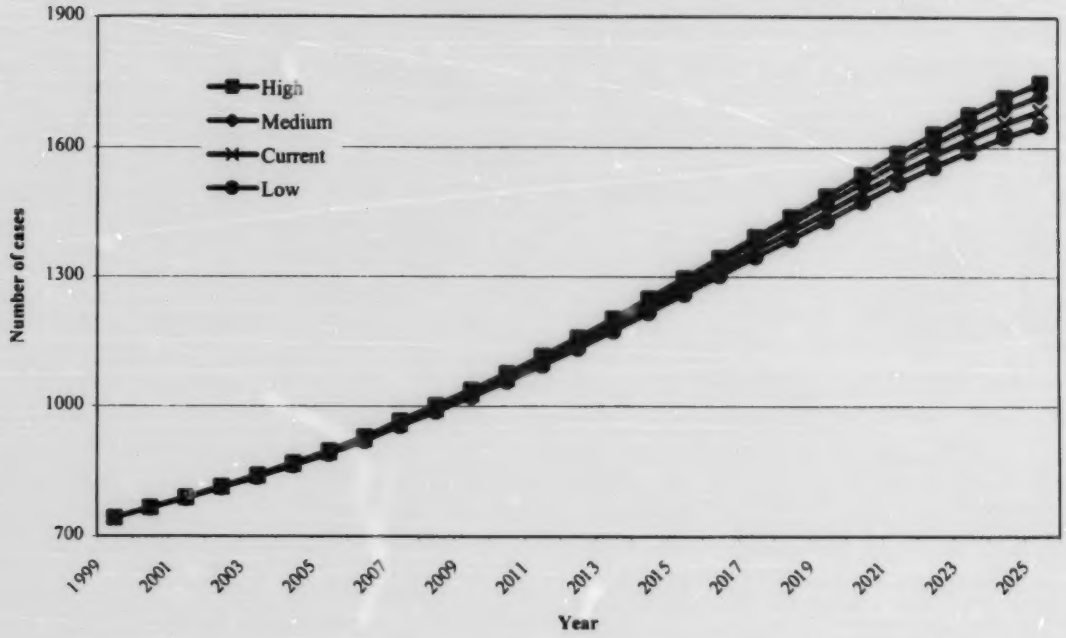


Figure 18.
Projected prostate cancer incidence in Manitoba, 1999-2025



Using the Current population projection model, we also estimated the future cancer incidence based on the 1998 cancer incidence rates, that is, it was assumed that the 1998 incidence rates remained constant over the entire projection period. The purpose of doing this was to determine what proportion of the increase observed in using the trend based projections was due to the changing population size and structure. Table 6 compares the 2025 projected incidence based on this method with that obtained based on the method used for all our other projections, namely that the incidence rates will follow the trend observed for the period 1980-98.

Table 6.
Cancer incidence and prevalence by incidence scenario and site
(Current population growth model)[1]

Incidence Scenario	Site: Total No.	Total % Diff	Lung No.	Lung % Diff	Colorectal No.	Colorectal % Diff	Breast No.	Breast % Diff	Prostate No.	Prostate % Diff
Incidence										
1998	5135		786		754		722		723	
2025 constant	6578	28.1	1197	52.3	1018	35.0	933	29.2	1070	48.0
2025 trend	7607	48.1	1465	86.3	969	28.5	1172	62.3	1685	133.0
Prevalence										
1998	33345		1575		4663		7521		5408	
2025 constant	53061	59.1	2645	67.9	7441	59.6	12338	64.0	9868	82.5
2025 trend	59259	77.7	3305	109.9	7203	54.5	14268	89.7	15081	178.9

1. Constant assumes estimated 1998 incident rates will remain constant over time. Trend refers to the annual projected estimated incidence rates based on the regression analysis.
2. % Diff is the % difference from the 1998 observed incidence and prevalence.

Although the percentage increase in the number of incident and prevalent cases decreases when the assumption is made that the 1998 cancer incidence rates will remain the same until 2025, there will still be a substantial increase in the actual number of incident (28%) and prevalent (59%) cases. Thus, 58% of the increase in incidence and 76% of the increase in prevalence of total cancers is due to the changing population size and its age structure.

As a consequence of the changing age distribution of the Manitoba population and the changing trends in incidence and prevalence of the four major cancer sites (lung, breast, prostate and colorectal cancers), there will be some change in their relative contribution to the overall incidence and prevalence. The four sites contributed 58% of all incident cases in 1998 (Figure 19). By 2025 their proportion is estimated to increase to 70% based on the Low model. There was very little difference in these proportions when other models were used. The proportions of lung, breast and prostate cancers are projected to increase over time, with prostate cancer increasing the most (14% to 22%). Colorectal cancer is the only site which will contribute a smaller proportion to the total number of incident cases in 2025. A similar pattern will be observed for the changing distribution of prevalent cases (Figure 20).

Figure 19.
Percent distribution of total incident cancers by site, 1998 and 2025 (Low)

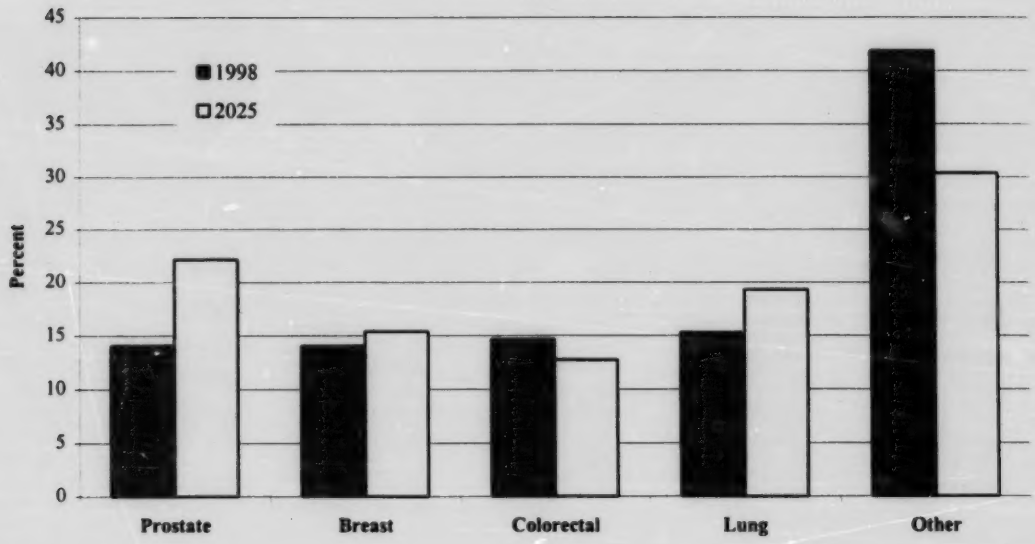
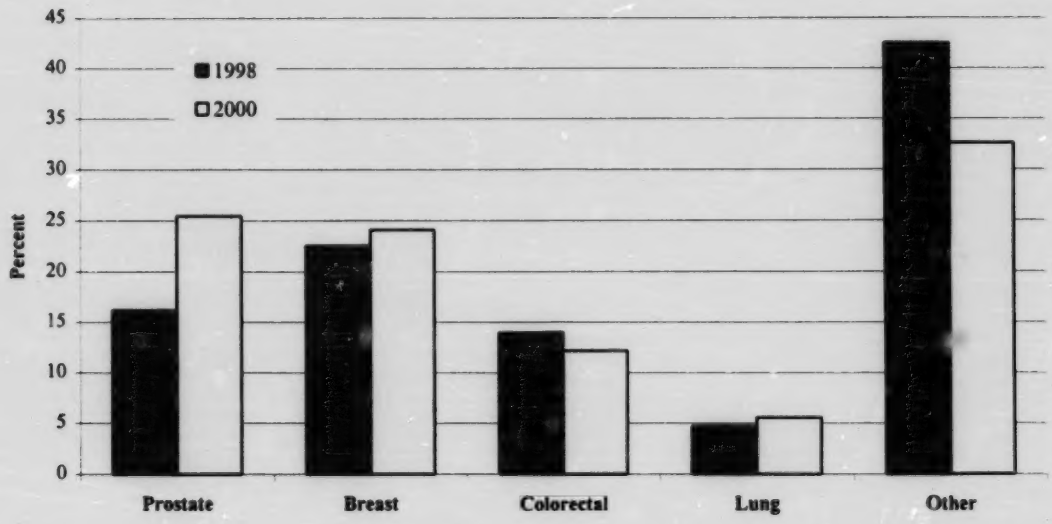


Figure 20.
Percent distribution of total prevalent cancers by site, 1998 and 2025 (Low)



3.2.4 RHA cancer incidence and prevalence

The Appendix tables provide the projected Low and High scenario incidence and prevalence numbers for total cancer and for each of the four sites with the highest incidence (lung, colorectal, breast and prostate cancer), not only for Manitoba as a whole, but for each of the RHAs. The projected percent change in cancer incidence and prevalence in each of the RHAs is summarized in Tables 7 and 8.

Changes in the incidence and prevalence vary markedly across the province. The lowest projected increases are in the RHAs of South Westman and Parkland. In these RHAs, the number of incident colon cancer cases is projected to decline. The largest increases are expected to be in North and South Eastman and in the northern RHAs (Norman, Burntwood, Churchill). It needs to be recognized that some of these projections are based on small numbers, and may therefore, be subject to a great deal of variability.

Table 7.
Percent change in cancer incidence (Low-High)
by RHA and site, 1998-2025

RHA \ Site	Total	Lung	Colorectal	Breast	Prostate
Winnipeg	49.2- 58.1	101.8- 111.7	30.6- 37.6	54.6- 63.7	138.8- 153.0
Brandon	34.9- 42.7	60.5- 67.4	14.3- 21.4	115.4- 126.9	58.5- 68.3
North Eastman	72.4- 82.7	85.2- 92.6	60.0- 70.0	94.4- 105.6	126.5- 138.2
South Eastman	83.9- 94.3	109.5- 119.0	35.7- 42.9	92.3- 103.8	188.9- 207.4
Interlake	49.9- 58.7	90.7- 101.9	45.0- 55.0	85.7- 97.6	119.6- 133.9
Central	35.2- 42.9	24.6- 30.4	39.2- 47.1	68.6- 78.4	171.4- 187.8
Marquette	17.1- 23.9	23.5- 29.4	3.2- 6.5	22.6- 29.0	80.6- 93.5
South Westman	5.8- 11.5	59.1- 63.6	-17.5- -12.5	9.7- 16.1	96.2- 103.8
Parkland	6.2- 12.3	2.2- 8.9	-15.8- -10.5	15.6- 21.9	50.0- 57.5
Norman	75.3- 87.7	115.4- 123.1	18.1- 27.3	72.7- 81.8	136.4- 154.5
Burntwood	84.5- 94.4				
Churchill	250.0- 300.0				
Manitoba	**45.2- 53.7**	**83.2- 92.2**	**26.1- 32.9**	**48.7- 68.3**	**128.4- 141.9**

Table 8.
Percent change in cancer prevalence (Low-High)
by RHA and site, 1998-2025

RHA \ Site	Total	Lung	Colorectal	Breast	Prostate
Winnipeg	81.5- 90.9	123.8- 134.7	58.3- 65.4	90.1- 99.0	190.1- 203.7
Brandon	74.7- 83.5	101.3- 111.3	45.8- 66.8	86.7- 95.4	156.7- 168.1
North Eastman	101.2- 111.4	126.5- 138.8	64.8- 72.5	125.4- 136.5	233.0- 248.7
South Eastman	99.8- 109.9	127.7- 138.3	63.0- 70.2	122.1- 132.2	250.2- 266.0
Interlake	71.5- 80.7	75.6- 84.6	76.0- 84.4	86.6- 95.9	170.2- 183.5
Central	70.2- 78.7	73.5- 82.1	39.2- 45.1	83.7- 92.2	170.4- 182.5
Marquette	34.5- 41.0	47.7- 55.4	12.9- 17.5	55.9- 62.7	84.8- 92.9
South Westman	31.3- 37.4	75.5- 83.7	16.8- 21.7	41.7- 47.8	105.5- 114.4
Parkland	30.8- 37.4	35.1- 41.6	9.5- 14.0	45.2- 51.9	76.0- 84.0
Norman	69.2- 80.6	66.7- 77.8	41.4- 50.0	90.2- 102.0	192.5- 210.4
Burntwood	105.5- 117.1	236.4- 254.5	158.1- 171.0	184.9- 200.0	282.5- 302.5
Churchill	214.3- 235.7				
Manitoba	**74.6- 83.6**	**106.3- 116.4**	**52.1- 58.9**	**86.7- 95.4**	**174.4- 187.2**

4. LIMITATIONS

There are several limitations to our projection models that have to be taken into account when interpreting the results of this report.

- All of the regressions that were undertaken were simple linear models that placed equal value on the rates (e.g. cancer incidence) for all years included in the regression. Thus any significant changes in trend in recent years (e.g. higher incidence due to the introduction of a screening program, lower mortality due to improved treatment), would not be adequately captured in the model. Furthermore, the trend in age-sex-specific rates were not always linear.
- The results for RHAs were often based on small numbers. Consequently there is a great deal of variability in the projections. Future versions of the projection model will include confidence intervals.
- Trends in age-sex-specific cancer incidence rates were not calculated for individual RHAs due to the small numbers. Crude estimates were derived by adjusting the total Manitoba trends up or down according to the ratio of the RHA/Manitoba rate.

- Trends in mortality and migration rates were not calculated for individual RHAs. For mortality the overall Manitoba rates were used, while for migration, estimates were derived by adjusting the total Manitoba trends up or down according to the ratio of the RHA/Manitoba rate.
- The cancer incidence and prevalence estimates were based on linked CCMB and Manitoba Health records. Approximately 5% of records in the cancer registry did not link to the MHPR, thus there will be an underestimate in the projected number of incident and prevalent cases.

5. CONCLUSIONS

It is unlikely that the above limitations will have substantially altered the results of the projection models for Manitoba as a whole. If the current trend in cancer incidence rates continues, there will be a substantial increase in the number of incident and prevalent cancer cases in Manitoba over the next twenty-five years. As a consequence, governments and individuals responsible for health care planning need to be aware that there is going to be an increasing need for facilities and manpower in order to deal with the increasing number of cancer patients. Since staff shortages and waiting lists for certain forms of treatment already exist, there is an urgency to address these issues. The projections in this report only included most of the malignant neoplasms. Excluded from the total projections were non-melanoma skin cancers, benign and in situ neoplasms, and those of uncertain behaviour or unspecified nature. These neoplasms will further compound the problem as they will also require resources.

Currently the majority of the health care dollar is being spent on treatment. However, it needs to be recognized that treatment will not have any impact in reducing the projected number of incident and prevalent cases. If anything, improved treatment will lead to lower mortality and thus to an even higher prevalence. There is a need for a more comprehensive cancer control program that not only involves treatment, but one that places much more emphasis on seeking the causes of cancer and on implementing the appropriate prevention programs. Without an increased focus on the etiology of cancer and the development of prevention programs it will not be possible to reduce the projected increased burden of cancer in Manitoba.

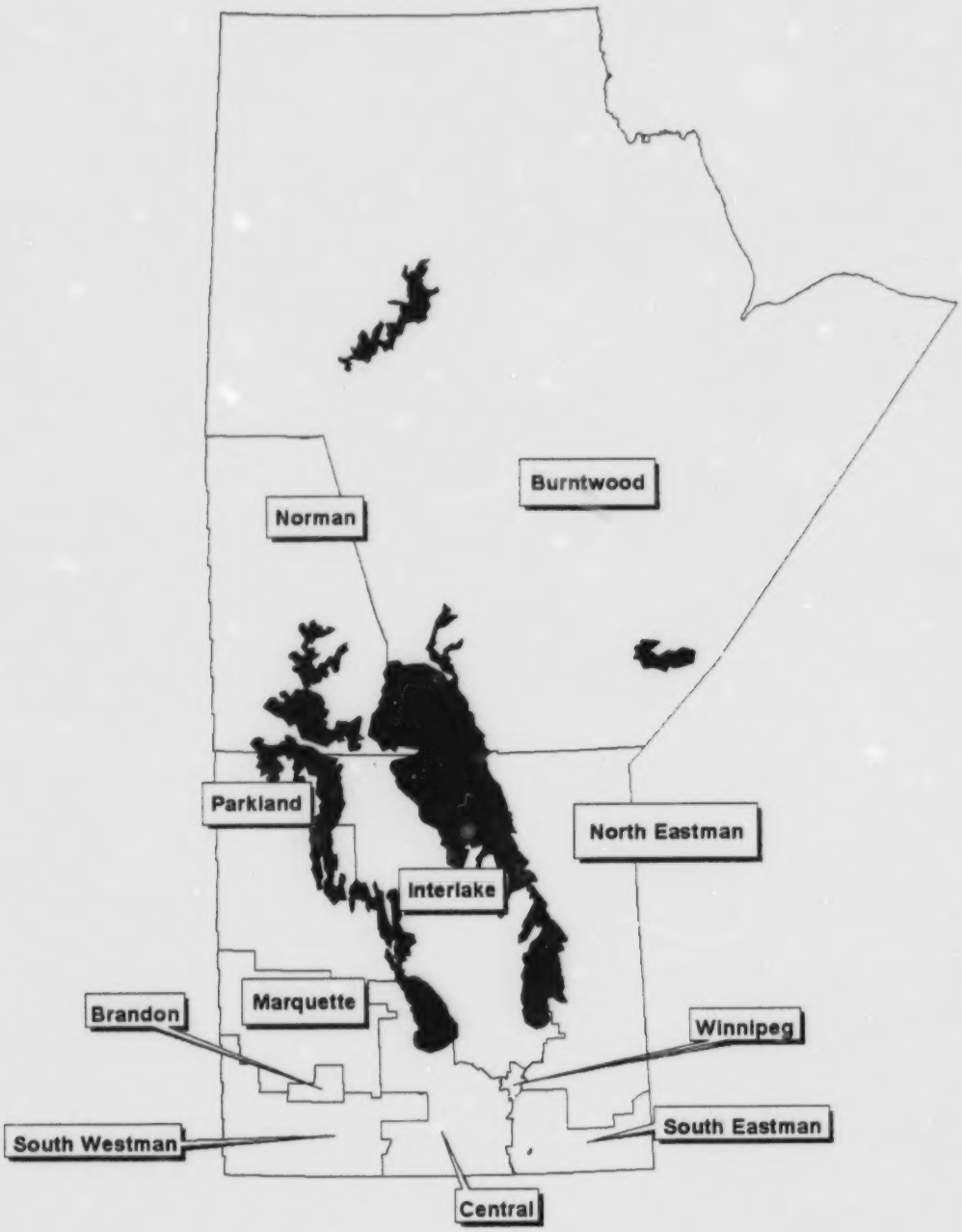
6. REFERENCES

1. George MV, Norris MJ, Lault F, Loh S, Dai SY. Population Projections for Canada, Provinces and Territories 1993-2016. Ottawa: Statistics Canada (Cat. No. 91-520), 1994.
2. Manitoba Bureau of Statistics. Manitoba Health regions Populations Projections June 1, 1998 – June 1, 2025. Winnipeg, Manitoba Bureau of Statistics, 1999.

APPENDICES

Appendix 1

Map of Manitoba Regional Health Authorities



Appendix 2

Actual (1989-1998) and projected (1999-2025) cancer incidence by RHA, year and site, Low and High models

Appendix 2 – Incidence (continued)

Manitoba - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*4549*	*699*	*655*	*620*	*559*
1990	*4490*	*697*	*610*	*610*	*595*
1991	*4796*	*685*	*653*	*678*	*762*
1992	*5136*	*721*	*671*	*647*	*928*
1993	*5225*	*733*	*672*	*666*	*1004*
1994	*5140*	*757*	*644*	*690*	*881*
1995	*5093*	*766*	*661*	*727*	*771*
1996	*4907*	*764*	*658*	*712*	*633*
1997	*5060*	*748*	*723*	*688*	*688*
1998	*5135*	*786*	*754*	*722*	*723*
1999	5122	846	739	750	742
2000	5187	861	745	764	765
2001	5249	875	751	778	787
2002	5319	892	757	793	812
2003	5386	908	762	807	837
2004	5458	924	768	822	863
2005	5527	941	773	837	890
2006	5606	960	779	852	920
2007	5695	982	787	867	955
2008	5780	1003	794	882	988
2009	5862	1023	800	897	1022
2010	5954	1046	808	914	1057
2011	6048	1068	816	931	1095
2012	6150	1093	825	948	1133
2013	6254	1118	834	965	1174
2014	6365	1145	844	983	1217
2015	6469	1171	854	999	1259
2016	6579	1197	864	1015	1303
2017	6691	1225	876	1031	1347
2018	6794	1251	886	1046	1388
2019	6899	1279	896	1062	1431
2020	7008	1308	907	1077	1475
2021	7113	1337	918	1093	1517
2022	7211	1364	927	1108	1555
2023	7304	1392	937	1121	1592
2024	7388	1418	945	1135	1624
2025	7455	1440	951	1148	1651

Appendix 2 - Incidence (continued)

Manitoba – High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*4549*	*699*	*655*	*620*	*559*
1990	*4490*	*697*	*610*	*610*	*595*
1991	*4796*	*685*	*653*	*678*	*762*
1992	*5136*	*721*	*671*	*647*	*928*
1993	*5225*	*733*	*672*	*666*	*1004*
1994	*5140*	*757*	*644*	*690*	*881*
1995	*5093*	*766*	*661*	*727*	*771*
1996	*4907*	*764*	*658*	*712*	*633*
1997	*5060*	*748*	*723*	*688*	*688*
1998	*5135*	*786*	*754*	*722*	*723*
1999	5122	846	739	750	742
2000	5195	862	746	765	766
2001	5265	878	753	781	789
2002	5344	895	760	797	815
2003	5421	912	767	813	841
2004	5502	931	773	829	869
2005	5582	949	780	845	897
2006	5671	969	787	862	929
2007	5773	993	796	879	966
2008	5869	1016	804	896	1001
2009	5965	1038	812	913	1037
2010	6070	1062	822	932	1076
2011	6180	1087	831	951	1116
2012	6297	1114	842	971	1158
2013	6419	1142	853	991	1203
2014	6547	1172	866	1011	1250
2015	6670	1200	877	1030	1296
2016	6799	1230	890	1049	1344
2017	6932	1261	904	1068	1393
2018	7055	1291	916	1087	1439
2019	7183	1322	929	1106	1488
2020	7316	1355	943	1125	1538
2021	7445	1388	956	1144	1586
2022	7569	1420	969	1162	1631
2023	7688	1453	982	1180	1675
2024	7800	1483	993	1198	1715
2025	7895	1511	1002	1215	1749

Appendix 2 – Incidence (continued)

10. Winnipeg - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*2747*	*431*	*406*	*398*	*302*
1990	*2638*	*409*	*371*	*369*	*342*
1991	*2741*	*410*	*372*	*425*	*430*
1992	*2903*	*435*	*374*	*386*	*488*
1993	*2996*	*453*	*389*	*396*	*505*
1994	*2982*	*463*	*368*	*395*	*481*
1995	*2988*	*458*	*386*	*447*	*372*
1996	*2817*	*465*	*361*	*405*	*332*
1997	*2929*	*452*	*405*	*412*	*396*
1998	*2993*	*454*	*444*	*452*	*400*
1999	3009	518	435	454	407
2000	3054	529	440	463	421
2001	3095	539	444	472	435
2002	3143	551	449	482	451
2003	3188	562	454	491	467
2004	3235	573	458	500	483
2005	3279	585	462	509	499
2006	3330	598	466	518	518
2007	3387	613	472	528	539
2008	3440	627	477	537	559
2009	3492	640	481	547	579
2010	3549	655	486	557	601
2011	3607	671	492	567	623
2012	3671	687	498	577	647
2013	3735	704	504	588	671
2014	3802	721	511	598	696
2015	3866	738	517	609	722
2016	3933	756	524	618	747
2017	4002	774	531	628	773
2018	4065	791	538	638	798
2019	4128	809	544	647	824
2020	4195	829	551	657	850
2021	4259	847	558	666	874
2022	4319	866	564	675	898
2023	4375	884	571	683	919
2024	4425	901	576	691	939
2025	4466	916	580	699	955

Appendix 2 – Incidence (continued)

10. Winnipeg – High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*2747*	*431*	*406*	*398*	*302*
1990	*2638*	*409*	*371*	*369*	*342*
1991	*2741*	*410*	*372*	*425*	*430*
1992	*2903*	*435*	*374*	*386*	*488*
1993	*2996*	*453*	*389*	*396*	*505*
1994	*2982*	*463*	*368*	*395*	*481*
1995	*2988*	*458*	*386*	*447*	*372*
1996	*2817*	*465*	*361*	*405*	*332*
1997	*2929*	*452*	*405*	*412*	*396*
1998	*2993*	*454*	*444*	*452*	*400*
1999	3009	518	435	454	407
2000	3058	530	441	464	422
2001	3105	540	446	474	436
2002	3158	553	451	484	453
2003	3208	565	456	494	469
2004	3261	577	461	504	486
2005	3312	589	466	515	503
2006	3370	604	471	525	523
2007	3434	619	477	535	545
2008	3495	635	483	546	567
2009	3554	650	488	556	588
2010	3619	666	495	568	611
2011	3687	682	501	579	636
2012	3760	700	508	591	661
2013	3834	719	516	604	687
2014	3912	738	524	616	715
2015	3988	757	531	628	743
2016	4066	777	539	639	771
2017	4147	797	548	651	800
2018	4224	817	555	662	828
2019	4300	837	564	674	857
2020	4380	859	573	686	886
2021	4459	880	582	697	915
2022	4535	901	590	708	942
2023	4607	922	598	719	968
2024	4674	943	605	730	992
2025	4732	961	611	740	1012

Appendix 2 – Incidence (continued)

15. Brandon - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*214*	*39*	*38*	*27*	*19*
1990	*170*	*37*	*27*	*25*	*14*
1991	*202*	*31*	*36*	*38*	*18*
1992	*225*	*29*	*35*	*28*	*45*
1993	*193*	*30*	*31*	*22*	*30*
1994	*223*	*26*	*32*	*30*	*32*
1995	*226*	*30*	*26*	*38*	*43*
1996	*237*	*40*	*31*	*45*	*31*
1997	*238*	*45*	*29*	*37*	*32*
1998	*241*	*43*	*42*	*26*	*41*
1999	224	39	38	35	30
2000	227	40	38	36	31
2001	231	41	39	37	32
2002	234	42	39	38	33
2003	237	43	39	39	34
2004	240	44	39	39	35
2005	243	44	40	40	36
2006	246	45	40	41	37
2007	251	46	40	42	39
2008	255	48	41	42	40
2009	258	49	41	43	41
2010	263	50	42	44	43
2011	267	51	42	45	44
2012	272	52	43	46	46
2013	276	53	43	47	48
2014	280	55	43	48	49
2015	284	56	44	48	51
2016	288	57	44	49	52
2017	293	58	45	50	54
2018	297	59	45	51	55
2019	302	61	46	51	57
2020	307	62	46	52	59
2021	311	64	47	53	61
2022	315	65	47	54	62
2023	319	66	48	54	63
2024	323	68	48	55	65
2025	325	69	48	56	65

Appendix 2 – Incidence (continued)

15. Brandon - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*214*	*39*	*38*	*27*	*19*
1990	*170*	*37*	*27*	*25*	*14*
1991	*202*	*31*	*36*	*38*	*18*
1992	*225*	*29*	*35*	*28*	*45*
1993	*193*	*30*	*31*	*22*	*30*
1994	*223*	*26*	*32*	*30*	*32*
1995	*226*	*30*	*26*	*38*	*43*
1996	*237*	*40*	*31*	*45*	*31*
1997	*238*	*45*	*29*	*37*	*32*
1998	*241*	*43*	*42*	*26*	*41*
1999	224	39	38	35	30
2000	228	40	38	36	31
2001	231	41	39	37	32
2002	235	42	39	38	33
2003	239	43	39	39	34
2004	242	44	40	40	35
2005	245	45	40	40	36
2006	249	46	40	41	38
2007	254	47	41	42	39
2008	259	48	41	43	41
2009	263	49	42	44	42
2010	268	50	42	45	44
2011	272	52	43	46	45
2012	278	53	43	47	47
2013	283	54	44	48	49
2014	288	56	44	49	51
2015	293	57	45	50	52
2016	298	58	45	51	54
2017	303	60	46	52	56
2018	308	61	47	52	57
2019	314	63	47	53	59
2020	320	64	48	54	61
2021	325	66	49	55	63
2022	331	68	49	56	65
2023	336	69	50	57	67
2024	341	71	50	58	68
2025	344	72	51	59	69

Appendix 2 – Incidence (continued)

20. North Eastman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*122*	*13*	*17*	*13*	*28*
1990	*120*	*16*	*14*	*14*	*15*
1991	*145*	*20*	*23*	*20*	*21*
1992	*163*	*18*	*20*	*23*	*34*
1993	*157*	*22*	*13*	*21*	*41*
1994	*150*	*24*	*20*	*12*	*35*
1995	*154*	*20*	*20*	*22*	*30*
1996	*130*	*20*	*19*	*12*	*23*
1997	*141*	*24*	*17*	*18*	*19*
1998	*156*	*27*	*20*	*18*	*34*
1999	153	25	20	19	30
2000	156	25	21	20	31
2001	160	26	21	20	32
2002	163	27	21	21	33
2003	167	27	22	21	35
2004	171	28	22	22	36
2005	175	29	23	23	38
2006	179	30	23	23	39
2007	184	31	23	24	41
2008	189	32	24	24	43
2009	193	32	24	25	45
2010	198	33	25	26	46
2011	202	34	25	26	48
2012	208	35	26	27	50
2013	213	37	26	28	52
2014	218	38	27	29	55
2015	223	39	27	29	57
2016	229	40	28	30	59
2017	234	41	28	31	61
2018	239	42	29	31	63
2019	244	43	29	32	65
2020	248	44	30	32	68
2021	253	46	30	33	70
2022	258	47	31	34	72
2023	262	48	31	34	74
2024	266	49	32	35	75
2025	269	50	32	35	77

Appendix 2 – Incidence (continued)

20. North Eastman - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*122*	*13*	*17*	*13*	*28*
1990	*120*	*16*	*14*	*14*	*15*
1991	*145*	*20*	*23*	*20*	*21*
1992	*163*	*18*	*20*	*23*	*34*
1993	*157*	*22*	*13*	*21*	*41*
1994	*130*	*24*	*20*	*12*	*35*
1995	*154*	*20*	*20*	*22*	*30*
1996	*130*	*20*	*19*	*12*	*23*
1997	*141*	*24*	*17*	*18*	*19*
1998	*156*	*27*	*20*	*18*	*34*
1999	153	25	20	19	30
2000	157	25	21	20	31
2001	160	26	21	20	32
2002	164	27	22	21	34
2003	168	27	22	21	35
2004	173	28	22	22	37
2005	177	29	23	23	38
2006	181	30	23	23	40
2007	186	31	24	24	41
2008	191	32	24	25	43
2009	196	33	25	26	45
2010	201	34	25	26	47
2011	207	35	26	27	49
2012	212	36	26	28	51
2013	218	37	27	29	54
2014	224	39	28	29	56
2015	230	40	28	30	58
2016	236	41	29	31	61
2017	242	42	29	32	63
2018	248	44	30	32	66
2019	253	45	31	33	68
2020	259	46	31	34	70
2021	265	47	32	34	73
2022	270	49	32	35	75
2023	276	50	33	36	77
2024	280	51	33	36	79
2025	285	52	34	37	81

Appendix 2 – Incidence (continued)

25. South Eastman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*142*	*12*	*23*	*16*	*19*
1990	*190*	*22*	*19*	*27*	*31*
1991	*168*	*21*	*19*	*19*	*33*
1992	*175*	*22*	*18*	*19*	*39*
1993	*180*	*19*	*27*	*20*	*35*
1994	*181*	*24*	*21*	*30*	*34*
1995	*148*	*25*	*16*	*19*	*31*
1996	*165*	*17*	*25*	*29*	*23*
1997	*190*	*21*	*29*	*26*	*25*
1998	*174*	*21*	*28*	*26*	*27*
1999	184	24	25	28	30
2000	188	24	25	29	31
2001	192	25	26	29	32
2002	197	25	26	30	34
2003	201	26	26	31	35
2004	206	26	27	32	37
2005	210	27	27	33	38
2006	215	28	28	34	40
2007	221	28	28	34	42
2008	226	29	29	35	43
2009	230	30	29	36	45
2010	236	30	30	37	47
2011	241	31	30	38	49
2012	247	32	31	39	51
2013	253	33	31	40	53
2014	259	34	32	41	55
2015	265	35	33	42	57
2016	271	36	33	43	60
2017	277	37	34	44	62
2018	283	37	34	44	64
2019	288	38	35	45	66
2020	294	39	35	46	69
2021	300	40	36	47	71
2022	305	41	37	48	73
2023	311	42	37	49	75
2024	315	43	38	49	77
2025	320	44	38	50	78

Appendix 2 – Incidence (continued)

25. South Eastman - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*142*	*12*	*23*	*16*	*19*
1990	*190*	*22*	*19*	*27*	*31*
1991	*168*	*21*	*19*	*19*	*33*
1992	*175*	*22*	*18*	*19*	*39*
1993	*180*	*19*	*27*	*20*	*35*
1994	*181*	*24*	*21*	*30*	*34*
1995	*148*	*25*	*16*	*19*	*31*
1996	*165*	*17*	*25*	*29*	*23*
1997	*190*	*21*	*29*	*26*	*25*
1998	*174*	*21*	*28*	*26*	*27*
1999	184	24	25	28	30
2000	188	24	25	29	31
2001	193	25	26	29	33
2002	198	25	26	30	34
2003	203	26	27	31	35
2004	207	27	27	32	37
2005	212	27	28	33	38
2006	218	28	28	34	40
2007	224	29	29	35	42
2008	229	29	29	36	44
2009	234	30	30	37	46
2010	240	31	30	38	48
2011	246	32	31	39	50
2012	253	33	31	40	52
2013	259	34	32	41	54
2014	266	35	33	42	56
2015	273	36	33	43	59
2016	280	37	34	44	61
2017	287	38	35	45	64
2018	293	38	35	46	66
2019	300	39	36	47	69
2020	307	41	37	48	71
2021	313	42	38	49	74
2022	320	43	38	50	76
2023	327	44	39	51	79
2024	333	45	39	52	81
2025	338	46	40	53	83

Appendix 2 – Incidence (continued)

30. Interlake - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*286*	*51*	*35*	*28*	*44*
1990	*288*	*53*	*32*	*45*	*37*
1991	*366*	*53*	*48*	*49*	*60*
1992	*355*	*60*	*41*	*41*	*67*
1993	*382*	*55*	*51*	*49*	*81*
1994	*363*	*52*	*46*	*51*	*65*
1995	*347*	*61*	*35*	*48*	*62*
1996	*364*	*64*	*49*	*52*	*36*
1997	*359*	*42*	*43*	*46*	*45*
1998	*349*	*54*	*40*	*42*	*56*
1999	354	61	44	50	56
2000	359	62	44	51	57
2001	364	63	45	52	59
2002	368	64	45	53	61
2003	373	66	46	54	63
2004	378	67	46	55	65
2005	384	68	46	56	67
2006	389	69	47	57	69
2007	396	71	47	59	72
2008	402	72	48	60	74
2009	408	74	48	61	77
2010	415	76	49	62	79
2011	423	77	49	63	82
2012	430	79	50	64	85
2013	438	81	51	66	88
2014	446	83	52	67	91
2015	454	85	52	68	95
2016	462	87	53	69	98
2017	470	89	54	70	101
2018	477	90	54	71	104
2019	484	92	55	72	107
2020	491	94	56	73	110
2021	499	96	56	74	113
2022	506	98	57	75	116
2023	512	100	58	76	119
2024	518	102	58	77	121
2025	523	103	58	78	123

Appendix 2 – Incidence (continued)

30. Interlake - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*286*	*51*	*35*	*28*	*44*
1990	*288*	*53*	*32*	*45*	*37*
1991	*366*	*53*	*48*	*49*	*60*
1992	*355*	*60*	*41*	*41*	*67*
1993	*382*	*55*	*51*	*49*	*81*
1994	*363*	*52*	*46*	*51*	*65*
1995	*347*	*61*	*35*	*48*	*62*
1996	*364*	*64*	*49*	*52*	*36*
1997	*359*	*42*	*43*	*46*	*45*
1998	*349*	*54*	*40*	*42*	*56*
1999	354	61	44	50	56
2000	359	62	44	51	57
2001	365	64	45	52	59
2002	370	65	45	53	61
2003	376	66	46	54	63
2004	381	67	46	56	65
2005	387	68	47	57	68
2006	394	70	47	58	70
2007	401	72	48	59	72
2008	408	73	48	61	75
2009	415	75	49	62	78
2010	423	77	50	63	81
2011	432	79	50	65	84
2012	441	81	51	66	87
2013	450	83	52	67	91
2014	459	85	53	69	94
2015	468	87	54	70	97
2016	478	89	55	72	101
2017	487	91	55	73	105
2018	495	93	56	74	108
2019	504	95	57	76	111
2020	513	98	58	77	115
2021	523	100	59	78	119
2022	532	102	60	79	122
2023	540	105	60	80	125
2024	548	107	61	82	128
2025	554	109	62	83	131

Appendix 2 – Incidence (continued)

40. Central - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*331*	*43*	*42*	*28*	*56*
1990	*383*	*51*	*41*	*43*	*78*
1991	*391*	*50*	*48*	*45*	*82*
1992	*441*	*44*	*66*	*53*	*88*
1993	*422*	*42*	*46*	*55*	*97*
1994	*399*	*49*	*58*	*57*	*63*
1995	*374*	*47*	*52*	*49*	*64*
1996	*380*	*51*	*52*	*62*	*50*
1997	*374*	*48*	*70*	*38*	*51*
1998	*420*	*69*	*51*	*51*	*49*
1999	403	55	58	57	64
2000	406	55	58	58	65
2001	409	56	58	59	67
2002	413	56	59	60	68
2003	416	57	59	61	70
2004	421	58	59	62	72
2005	425	59	59	63	74
2006	429	59	59	64	76
2007	435	60	60	65	78
2008	440	61	60	66	80
2009	446	62	60	67	83
2010	452	64	61	68	86
2011	458	65	61	69	88
2012	465	66	62	71	91
2013	473	67	62	72	94
2014	481	69	63	73	98
2015	489	70	64	74	101
2016	498	72	64	76	105
2017	506	73	65	77	108
2018	514	75	66	78	112
2019	523	76	67	79	115
2020	531	78	67	80	119
2021	540	80	68	82	122
2022	547	81	69	83	125
2023	555	83	70	84	128
2024	562	85	70	85	131
2025	568	86	71	86	133

Appendix 2 – Incidence (continued)

40. Central - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*331*	*43*	*42*	*28*	*56*
1990	*383*	*51*	*41*	*43*	*78*
1991	*391*	*50*	*48*	*45*	*82*
1992	*441*	*44*	*66*	*53*	*88*
1993	*422*	*42*	*46*	*55*	*97*
1994	*399*	*49*	*58*	*57*	*63*
1995	*374*	*47*	*52*	*49*	*64*
1996	*380*	*51*	*52*	*62*	*50*
1997	*374*	*48*	*70*	*38*	*51*
1998	*420*	*69*	*51*	*51*	*49*
1999	403	55	58	57	64
2000	407	55	58	58	66
2001	410	56	59	59	67
2002	415	57	59	60	69
2003	419	57	59	61	70
2004	424	58	59	62	72
2005	429	59	60	63	74
2006	434	60	60	64	76
2007	440	61	60	66	79
2008	447	62	61	67	81
2009	453	63	61	68	84
2010	460	64	62	69	87
2011	468	66	62	71	90
2012	476	67	63	72	93
2013	485	69	64	74	97
2014	495	70	65	75	100
2015	504	72	65	77	104
2016	514	74	66	78	108
2017	524	75	67	79	112
2018	533	77	68	81	116
2019	544	79	69	82	120
2020	554	81	70	84	124
2021	564	83	71	85	128
2022	574	85	72	87	131
2023	583	86	73	88	135
2024	592	88	74	90	138
2025	600	90	75	91	141

Appendix 2 – Incidence (continued)

50. Marquette - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*189*	*23*	*32*	*24*	*35*
1990	*205*	*31*	*25*	*27*	*19*
1991	*228*	*28*	*28*	*18*	*36*
1992	*236*	*29*	*35*	*20*	*53*
1993	*243*	*36*	*29*	*33*	*55*
1994	*233*	*31*	*28*	*36*	*52*
1995	*231*	*34*	*35*	*32*	*39*
1996	*219*	*29*	*42*	*25*	*43*
1997	*221*	*31*	*33*	*30*	*40*
1998	*205*	*34*	*31*	*31*	*31*
1999	210	33	33	30	35
2000	210	33	32	30	36
2001	210	33	32	30	36
2002	210	33	32	30	36
2003	209	33	32	31	37
2004	209	33	31	31	37
2005	209	34	31	31	38
2006	210	34	31	31	38
2007	210	34	31	32	39
2008	211	34	31	32	40
2009	212	34	31	32	40
2010	213	35	31	33	41
2011	213	35	30	33	42
2012	215	35	30	33	43
2013	216	36	30	34	44
2014	218	36	30	34	45
2015	220	37	30	34	46
2016	223	37	31	35	47
2017	225	38	31	35	49
2018	227	38	31	35	50
2019	229	39	31	36	51
2020	231	39	31	36	52
2021	233	40	31	36	53
2022	235	40	31	37	54
2023	237	41	31	37	55
2024	239	41	32	38	56
2025	240	42	32	38	56

Appendix 2 – Incidence (continued)

50. Marquette - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*189*	*23*	*32*	*24*	*35*
1990	*205*	*31*	*25*	*27*	*19*
1991	*228*	*28*	*28*	*18*	*36*
1992	*236*	*29*	*35*	*20*	*53*
1993	*243*	*36*	*29*	*33*	*55*
1994	*233*	*31*	*28*	*36*	*52*
1995	*231*	*34*	*35*	*32*	*39*
1996	*219*	*29*	*42*	*25*	*43*
1997	*221*	*31*	*33*	*30*	*40*
1998	*205*	*34*	*31*	*31*	*31*
1999	210	33	33	30	35
2000	211	33	32	30	36
2001	210	33	32	30	36
2002	210	33	32	31	36
2003	210	34	32	31	37
2004	211	34	32	31	37
2005	211	34	31	31	38
2006	212	34	31	32	39
2007	213	34	31	32	39
2008	214	35	31	32	40
2009	215	35	31	33	41
2010	216	35	31	33	42
2011	218	36	31	34	43
2012	219	36	31	34	43
2013	221	36	31	34	45
2014	224	37	31	35	46
2015	227	37	31	35	47
2016	230	38	31	36	49
2017	233	39	32	36	50
2018	235	39	32	37	51
2019	238	40	32	37	53
2020	241	41	32	38	54
2021	243	41	32	38	55
2022	246	42	33	38	57
2023	249	42	33	39	58
2024	252	43	33	40	59
2025	254	44	33	40	60

Appendix 2 – Incidence (continued)

55. South Westman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*200*	*34*	*31*	*30*	*25*
1990	*184*	*26*	*39*	*23*	*26*
1991	*200*	*23*	*25*	*34*	*30*
1992	*257*	*29*	*37*	*27*	*56*
1993	*226*	*21*	*33*	*31*	*54*
1994	*214*	*27*	*30*	*32*	*42*
1995	*229*	*34*	*38*	*31*	*45*
1996	*207*	*21*	*42*	*21*	*29*
1997	*209*	*28*	*38*	*26*	*28*
1998	*208*	*22*	*40*	*31*	*26*
1999	200	27	35	28	33
2000	200	28	35	28	33
2001	199	28	35	28	33
2002	199	28	34	28	34
2003	198	28	34	28	34
2004	198	28	34	29	34
2005	197	28	34	29	35
2006	198	28	33	29	35
2007	198	28	33	29	36
2008	199	29	33	30	36
2009	199	29	33	30	37
2010	200	29	33	30	38
2011	200	29	33	30	38
2012	201	30	33	31	39
2013	203	30	33	31	40
2014	204	30	33	31	41
2015	206	31	33	31	42
2016	208	31	33	32	43
2017	209	32	33	32	44
2018	211	32	33	32	45
2019	213	32	33	32	46
2020	215	33	33	33	47
2021	216	33	33	33	48
2022	217	34	33	33	49
2023	218	34	33	33	49
2024	219	34	33	34	50
2025	220	35	33	34	51

Appendix 2 – Incidence (continued)

55. South Westman - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*200*	*34*	*31*	*30*	*25*
1990	*184*	*26*	*39*	*23*	*26*
1991	*200*	*23*	*25*	*34*	*30*
1992	*257*	*29*	*37*	*27*	*56*
1993	*226*	*21*	*33*	*31*	*54*
1994	*214*	*27*	*30*	*32*	*42*
1995	*229*	*34*	*38*	*31*	*45*
1996	*207*	*21*	*42*	*21*	*29*
1997	*209*	*28*	*38*	*26*	*28*
1998	*208*	*22*	*40*	*31*	*26*
1999	200	27	35	28	33
2000	200	28	35	28	33
2001	200	28	35	28	33
2002	199	28	35	28	34
2003	199	28	34	29	34
2004	199	28	34	29	34
2005	199	28	34	29	35
2006	200	28	34	29	35
2007	200	29	34	30	36
2008	201	29	34	30	37
2009	202	29	33	30	38
2010	204	30	33	31	38
2011	204	30	33	31	39
2012	206	30	33	31	40
2013	207	31	33	32	41
2014	209	31	33	32	42
2015	211	31	33	32	43
2016	214	32	34	33	45
2017	216	32	34	33	46
2018	218	33	34	33	47
2019	221	33	34	34	48
2020	223	34	34	34	49
2021	225	34	34	34	50
2022	226	35	35	35	51
2023	228	35	35	35	52
2024	230	36	35	35	53
2025	232	36	35	36	53

Appendix 2 – Incidence (continued)

60. Parkland -Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*216*	*33*	*24*	*41*	*26*
1990	*204*	*32*	*33*	*18*	*27*
1991	*242*	*32*	*36*	*14*	*41*
1992	*234*	*31*	*29*	*31*	*50*
1993	*268*	*36*	*37*	*23*	*75*
1994	*253*	*37*	*23*	*34*	*47*
1995	*244*	*30*	*35*	*29*	*56*
1996	*242*	*35*	*24*	*27*	*51*
1997	*248*	*38*	*37*	*36*	*40*
1998	*243*	*45*	*38*	*32*	*40*
1999	235	38	34	30	39
2000	234	38	34	30	39
2001	233	38	33	30	40
2002	233	38	33	30	40
2003	233	38	33	30	40
2004	233	39	33	31	41
2005	233	39	32	31	41
2006	233	39	32	31	42
2007	233	39	32	31	43
2008	234	39	32	32	43
2009	234	39	32	32	44
2010	234	40	31	32	45
2011	235	40	31	32	46
2012	236	40	31	33	47
2013	238	41	31	33	48
2014	241	41	31	33	49
2015	242	42	31	34	50
2016	244	42	31	34	51
2017	245	43	32	34	52
2018	247	43	32	34	53
2019	248	43	32	35	54
2020	251	44	32	35	55
2021	253	45	32	35	57
2022	254	45	32	36	58
2023	256	45	32	36	58
2024	258	46	32	36	59
2025	258	46	32	37	60

Appendix 2 – Incidence (continued)

60. Parkland - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*216*	*33*	*24*	*41*	*26*
1990	*204*	*32*	*33*	*18*	*27*
1991	*242*	*32*	*36*	*14*	*41*
1992	*234*	*31*	*29*	*31*	*50*
1993	*268*	*36*	*37*	*23*	*75*
1994	*253*	*37*	*23*	*34*	*47*
1995	*244*	*30*	*35*	*29*	*56*
1996	*242*	*35*	*24*	*27*	*51*
1997	*248*	*38*	*37*	*36*	*40*
1998	*243*	*45*	*38*	*32*	*40*
1999	235	38	34	30	39
2000	235	38	34	30	39
2001	234	38	33	30	40
2002	234	38	33	30	40
2003	234	39	33	31	41
2004	235	39	33	31	41
2005	235	39	33	31	42
2006	236	39	33	31	43
2007	236	39	32	32	43
2008	237	40	32	32	44
2009	238	40	32	32	45
2010	239	40	32	33	46
2011	240	41	32	33	47
2012	242	41	32	33	48
2013	244	41	32	34	49
2014	247	42	32	34	50
2015	249	43	32	35	51
2016	251	43	32	35	53
2017	254	44	32	35	54
2018	256	44	33	36	55
2019	258	45	33	36	56
2020	261	45	33	37	58
2021	264	46	33	37	59
2022	267	47	33	37	60
2023	269	47	33	38	61
2024	272	48	34	38	62
2025	273	49	34	39	63

Appendix 2 – Incidence (continued)

70. Norman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*63*	*14*	*5*	*11*	*3*
1990	*54*	*11*	*4*	*11*	*1*
1991	*62*	*9*	*11*	*10*	*6*
1992	*90*	*15*	*10*	*11*	*6*
1993	*91*	*12*	*11*	*10*	*20*
1994	*83*	*13*	*14*	*6*	*21*
1995	*86*	*12*	*15*	*5*	*22*
1996	*75*	*15*	*7*	*20*	*7*
1997	*87*	*15*	*11*	*12*	*4*
1998	*73*	*13*	*11*	*11*	*11*
1999	79	15	9	11	10
2000	80	16	9	12	11
2001	82	16	10	12	11
2002	83	16	10	12	11
2003	84	16	10	12	12
2004	86	17	10	13	12
2005	87	17	10	13	13
2006	89	18	10	13	13
2007	92	18	10	14	14
2008	94	19	10	14	15
2009	96	19	11	14	15
2010	99	20	11	15	16
2011	101	20	11	15	17
2012	103	21	11	15	17
2013	105	21	11	15	18
2014	107	22	12	16	19
2015	109	22	12	16	19
2016	111	23	12	16	20
2017	114	24	12	17	21
2018	116	24	12	17	22
2019	118	25	12	17	23
2020	120	25	13	18	23
2021	122	26	13	18	24
2022	124	26	13	18	25
2023	125	27	13	18	25
2024	127	27	13	19	26
2025	128	28	13	19	26

Appendix 2 – Incidence (continued)

70. Norman - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*63*	*14*	*5*	*11*	*3*
1990	*54*	*11*	*4*	*11*	*1*
1991	*62*	*9*	*11*	*10*	*6*
1992	*90*	*15*	*10*	*11*	*6*
1993	*91*	*12*	*11*	*10*	*20*
1994	*83*	*13*	*14*	*6*	*21*
1995	*86*	*12*	*15*	*5*	*22*
1996	*75*	*15*	*7*	*20*	*7*
1997	*87*	*15*	*11*	*12*	*4*
1998	*73*	*13*	*11*	*11*	*11*
1999	79	15	9	11	10
2000	81	16	9	12	11
2001	82	16	10	12	11
2002	84	16	10	12	11
2003	85	17	10	12	12
2004	87	17	10	13	12
2005	89	17	10	13	13
2006	91	18	10	13	13
2007	93	18	10	14	14
2008	96	19	11	14	15
2009	98	19	11	14	16
2010	101	20	11	15	17
2011	103	21	11	15	17
2012	106	21	11	16	18
2013	108	22	12	16	19
2014	111	22	12	16	20
2015	113	23	12	17	20
2016	115	24	12	17	21
2017	119	24	13	18	22
2018	121	25	13	18	23
2019	124	26	13	18	24
2020	127	27	13	19	25
2021	129	27	14	19	25
2022	132	28	14	19	26
2023	133	28	14	20	27
2024	136	29	14	20	27
2025	137	29	14	20	28

Appendix 2 – Incidence (continued)

80. Burntwood - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*39*	*6*	*2*	*4*	*2*
1990	*52*	*9*	*5*	*7*	*5*
1991	*49*	*8*	*7*	*6*	*5*
1992	*56*	*9*	*6*	*8*	*2*
1993	*66*	*7*	*5*	*6*	*11*
1994	*58*	*10*	*4*	*7*	*9*
1995	*60*	*15*	*3*	*6*	*7*
1996	*66*	*7*	*6*	*12*	*8*
1997	*60*	*4*	*11*	*4*	*8*
1998	*71*	*4*	*9*	*2*	*7*
1999	67	10	7	7	9
2000	69	10	8	8	9
2001	71	10	8	8	9
2002	73	11	8	8	10
2003	75	11	8	9	10
2004	77	11	8	9	11
2005	80	12	9	9	12
2006	82	12	9	9	12
2007	85	13	9	10	13
2008	87	13	9	10	14
2009	90	14	10	10	14
2010	92	14	10	11	15
2011	95	15	10	11	16
2012	97	15	10	11	16
2013	100	16	10	12	17
2014	102	16	11	12	18
2015	105	17	11	12	19
2016	108	17	11	13	19
2017	110	18	11	13	20
2018	113	18	12	13	21
2019	115	19	12	14	22
2020	118	19	12	14	22
2021	121	20	12	14	23
2022	123	20	13	15	24
2023	126	21	13	15	25
2024	128	22	13	15	25
2025	131	22	13	16	26

Appendix 2 – Incidence (continued)

80. Burntwood - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*39*	*6*	*2*	*4*	*2*
1990	*52*	*9*	*5*	*7*	*5*
1991	*49*	*8*	*7*	*6*	*5*
1992	*56*	*9*	*6*	*8*	*2*
1993	*66*	*7*	*5*	*6*	*11*
1994	*58*	*10*	*4*	*7*	*9*
1995	*60*	*15*	*3*	*6*	*7*
1996	*66*	*7*	*6*	*12*	*8*
1997	*60*	*4*	*11*	*4*	*8*
1998	*71*	*4*	*9*	*2*	*7*
1999	67	10	7	7	9
2000	69	10	8	8	9
2001	71	10	8	8	10
2002	74	11	8	8	10
2003	76	11	8	9	11
2004	78	12	8	9	11
2005	81	12	9	9	12
2006	83	12	9	10	12
2007	86	13	9	10	13
2008	89	13	9	10	14
2009	91	14	10	10	15
2010	94	14	10	11	15
2011	97	15	10	11	16
2012	100	15	10	12	17
2013	103	16	11	12	18
2014	106	16	11	12	18
2015	109	17	11	13	19
2016	111	18	12	13	20
2017	114	18	12	13	21
2018	117	19	12	14	22
2019	120	19	12	14	22
2020	123	20	13	15	23
2021	127	21	13	15	24
2022	130	21	13	15	25
2023	133	22	13	16	26
2024	136	23	14	16	27
2025	138	23	14	17	28

Appendix 2 – Incidence (continued)

90. Churchill – Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*0*	*0*	*0*	*0*	*0*
1990	*2*	*0*	*0*	*1*	*0*
1991	*2*	*0*	*0*	*0*	*0*
1992	*1*	*0*	*0*	*0*	*0*
1993	*1*	*0*	*0*	*0*	*0*
1994	*1*	*1*	*0*	*0*	*0*
1995	*6*	*0*	*0*	*1*	*0*
1996	*5*	*0*	*0*	*2*	*0*
1997	*4*	*0*	*0*	*3*	*0*
1998	*2*	*0*	*0*	*0*	*1*
1999	3	0	0	0	0
2000	3	0	0	0	0
2001	3	0	0	0	0
2002	4	0	0	0	0
2003	4	0	0	0	0
2004	4	0	0	1	0
2005	4	0	0	1	0
2006	4	0	0	1	0
2007	4	1	0	1	0
2008	5	1	0	1	0
2009	5	1	0	1	0
2010	5	1	0	1	1
2011	5	1	0	1	1
2012	5	1	0	1	1
2013	6	1	0	1	1
2014	6	1	0	1	1
2015	6	1	0	1	1
2016	6	1	0	1	1
2017	6	1	1	1	1
2018	6	1	1	1	1
2019	7	1	1	1	1
2020	7	1	1	1	1
2021	7	1	1	1	1
2022	7	1	1	1	1
2023	7	1	1	1	1
2024	7	1	1	1	1
2025	7	1	1	1	1

Appendix 2 – Incidence (continued)

90. Churchill - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*0*	*0*	*0*	*0*	*0*
1990	*2*	*0*	*0*	*1*	*0*
1991	*2*	*0*	*0*	*0*	*0*
1992	*1*	*0*	*0*	*0*	*0*
1993	*1*	*0*	*0*	*0*	*0*
1994	*1*	*1*	*0*	*0*	*0*
1995	*6*	*0*	*0*	*1*	*0*
1996	*5*	*0*	*0*	*2*	*0*
1997	*4*	*0*	*0*	*3*	*0*
1998	*2*	*0*	*0*	*0*	*1*
1999	3	0	0	0	0
2000	3	0	0	0	0
2001	3	0	0	0	0
2002	4	0	0	0	0
2003	4	0	0	1	0
2004	4	0	0	1	0
2005	4	0	0	1	0
2006	4	0	0	1	0
2007	4	1	0	1	0
2008	5	1	0	1	0
2009	5	1	0	1	0
2010	5	1	0	1	1
2011	5	1	0	1	1
2012	5	1	0	1	1
2013	6	1	0	1	1
2014	6	1	0	1	1
2015	6	1	0	1	1
2016	6	1	1	1	1
2017	7	1	1	1	1
2018	7	1	1	1	1
2019	7	1	1	1	1
2020	7	1	1	1	1
2021	7	1	1	1	1
2022	7	1	1	1	1
2023	8	1	1	1	1
2024	8	1	1	1	1
2025	8	1	1	1	1

Appendix 3

Actual (1989-1998) and projected (1999-2025) cancer prevalence by RHA, year and site, Low and High models

Appendix 3 – Prevalence (continued)

Manitoba – Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*24960*	*1247*	*3737*	*5621*	*2572*
1990	*25725*	*1341*	*3791*	*5806*	*2779*
1991	*26764*	*1356*	*3906*	*6035*	*3153*
1992	*27945*	*1402*	*3996*	*6269*	*3636*
1993	*29154*	*1424*	*4103*	*6507*	*4195*
1994	*30298*	*1449*	*4226*	*6715*	*4647*
1995	*31109*	*1462*	*4310*	*6975*	*4898*
1996	*31781*	*1498*	*4389*	*7145*	*5041*
1997	*32553*	*1538*	*4549*	*7292*	*5223*
1998	*33345*	*1575*	*4663*	*7521*	*5408*
1999	34607	1673	4801	7775	5619
2000	35779	1754	4925	8025	5831
2001	36869	1822	5038	8270	6043
2002	37897	1881	5142	8510	6259
2003	38870	1936	5238	8746	6482
2004	39796	1987	5326	8978	6712
2005	40685	2036	5409	9209	6948
2006	41552	2085	5489	9439	7198
2007	42410	2136	5566	9669	7464
2008	43258	2188	5641	9898	7745
2009	44098	2240	5714	10129	8041
2010	44936	2294	5787	10363	8352
2011	45780	2350	5861	10600	8683
2012	46631	2407	5936	10839	9031
2013	47500	2467	6015	11083	9400
2014	48387	2530	6096	11329	9788
2015	49285	2593	6180	11579	10196
2016	50197	2658	6266	11830	10623
2017	51120	2724	6356	12082	11065
2018	52042	2789	6447	12333	11519
2019	52968	2855	6541	12585	11986
2020	53892	2923	6635	12836	12462
2021	54811	2991	6731	13086	12946
2022	55710	3058	6826	13332	13430
2023	56584	3125	6919	13573	13910
2024	57423	3190	7009	13809	14382
2025	58218	3250	7094	14040	14840

Appendix 3 – Prevalence (continued)

Manitoba - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*24960*	*1247*	*3737*	*5621*	*2572*
1990	*25725*	*1341*	*3791*	*5806*	*2779*
1991	*26764*	*1356*	*3906*	*6035*	*3153*
1992	*27945*	*1402*	*3996*	*6269*	*3636*
1993	*29154*	*1424*	*4103*	*6507*	*4195*
1994	*30298*	*1449*	*4226*	*6715*	*4647*
1995	*31109*	*1462*	*4310*	*6975*	*4898*
1996	*31781*	*1498*	*4389*	*7145*	*5041*
1997	*32553*	*1538*	*4549*	*7292*	*5223*
1998	*33345*	*1575*	*4663*	*7521*	*5408*
1999	34639	1675	4804	7783	5622
2000	35849	1758	4933	8041	5838
2001	36982	1828	5050	8295	6054
2002	38058	1890	5159	8546	6275
2003	39085	1948	5261	8794	6504
2004	40070	2002	5355	9039	6742
2005	41024	2054	5445	9283	6987
2006	41960	2106	5532	9529	7246
2007	42894	2161	5616	9774	7523
2008	43823	2218	5700	10021	7817
2009	44750	2274	5783	10271	8127
2010	45681	2333	5865	10524	8455
2011	46624	2393	5949	10783	8804
2012	47582	2456	6035	11045	9173
2013	48565	2522	6125	11313	9565
2014	49572	2591	6219	11586	9980
2015	50598	2661	6316	11863	10417
2016	51645	2733	6417	12144	10875
2017	52711	2806	6522	12427	11353
2018	53783	2879	6629	12711	11845
2019	54867	2953	6738	12998	12353
2020	55956	3030	6851	13285	12874
2021	57049	3107	6965	13573	13407
2022	58129	3185	7079	13859	13943
2023	59192	3262	7192	14142	14480
2024	60228	3337	7303	14422	15011
2025	61227	3409	7410	14698	15533

Appendix 3 – Prevalence (continued)

10. Winnipeg - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*14688*	*739*	*2303*	*3457*	*1354*
1990	*15161*	*807*	*2322*	*3560*	*1508*
1991	*15720*	*810*	*2368*	*3719*	*1731*
1992	*16344*	*861*	*2397*	*3841*	*1999*
1993	*17010*	*877*	*2466*	*3966*	*2269*
1994	*17664*	*903*	*2530*	*4036*	*2532*
1995	*18108*	*902*	*2559*	*4206*	*2616*
1996	*18461*	*911*	*2573*	*4285*	*2727*
1997	*18973*	*937*	*2665*	*4384*	*2878*
1998	*19423*	*930*	*2730*	*4533*	*2993*
1999	20242	1008	2819	4693	3123
2000	21004	1069	2899	4851	3253
2001	21713	1119	2974	5005	3381
2002	22381	1162	3041	5154	3512
2003	23013	1201	3104	5302	3646
2004	23613	1237	3163	5448	3784
2005	24188	1271	3218	5592	3926
2006	24747	1304	3270	5736	4076
2007	25298	1339	3322	5879	4236
2008	25842	1374	3372	6022	4406
2009	26379	1410	3421	6166	4584
2010	26912	1446	3470	6312	4771
2011	27447	1483	3518	6459	4970
2012	27986	1522	3568	6609	5179
2013	28534	1562	3619	6760	5400
2014	29089	1604	3672	6914	5633
2015	29652	1647	3727	7070	5877
2016	30223	1690	3783	7227	6132
2017	30801	1733	3842	7384	6398
2018	31379	1777	3901	7541	6672
2019	31958	1821	3962	7699	6953
2020	32537	1865	4023	7857	7241
2021	33112	1910	4085	8014	7533
2022	33676	1955	4147	8169	7825
2023	34223	1999	4207	8321	8116
2024	34748	2041	4266	8470	8403
2025	35246	2081	4321	8615	8682

Appendix 3 – Prevalence (continued)

10. Winnipeg - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*14688*	*739*	*2303*	*3457*	*1354*
1990	*15161*	*807*	*2322*	*3560*	*1508*
1991	*15720*	*810*	*2368*	*3719*	*1731*
1992	*16344*	*861*	*2397*	*3841*	*1999*
1993	*17010*	*877*	*2466*	*3966*	*2269*
1994	*17664*	*903*	*2530*	*4036*	*2532*
1995	*18108*	*902*	*2559*	*4206*	*2616*
1996	*18461*	*911*	*2573*	*4285*	*2727*
1997	*18973*	*937*	*2665*	*4384*	*2878*
1998	*19423*	*930*	*2730*	*4533*	*2993*
1999	20261	1009	2821	4698	3124
2000	21046	1071	2904	4861	3256
2001	21781	1123	2981	5020	3388
2002	22478	1168	3051	5176	3521
2003	23142	1208	3118	5332	3659
2004	23778	1247	3181	5485	3801
2005	24392	1282	3239	5638	3948
2006	24993	1318	3296	5790	4104
2007	25591	1355	3353	5943	4270
2008	26184	1393	3408	6097	4447
2009	26773	1431	3462	6253	4634
2010	27363	1471	3517	6410	4831
2011	27959	1511	3572	6571	5040
2012	28563	1553	3628	6734	5261
2013	29179	1597	3687	6901	5496
2014	29808	1643	3748	7071	5744
2015	30449	1690	3810	7244	6005
2016	31102	1738	3875	7419	6280
2017	31766	1786	3943	7595	6566
2018	32436	1834	4012	7772	6862
2019	33111	1883	4083	7952	7168
2020	33790	1934	4155	8132	7482
2021	34472	1985	4228	8313	7803
2022	35145	2036	4302	8492	8127
2023	35808	2087	4375	8670	8451
2024	36453	2136	4446	8845	8773
2025	37075	2183	4515	9018	9090

Appendix 3 – Prevalence (continued)

15. Brandon - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1048*	*56*	*171*	*264*	*96*
1990	*1065*	*60*	*174*	*270*	*95*
1991	*1141*	*69*	*183*	*294*	*95*
1992	*1211*	*60*	*185*	*299*	*135*
1993	*1285*	*72*	*196*	*315*	*153*
1994	*1343*	*59*	*205*	*330*	*179*
1995	*1395*	*59*	*211*	*338*	*211*
1996	*1449*	*68*	*225*	*359*	*224*
1997	*1476*	*74*	*223*	*366*	*225*
1998	*1507*	*80*	*229*	*368*	*238*
1999	1567	84	239	382	248
2000	1622	87	247	394	257
2001	1673	90	255	407	266
2002	1722	92	262	419	275
2003	1768	95	269	431	284
2004	1812	97	275	442	294
2005	1852	100	280	454	303
2006	1891	102	285	465	312
2007	1930	105	289	476	322
2008	1968	107	294	487	332
2009	2006	110	298	498	343
2010	2044	113	302	510	355
2011	2082	116	306	521	368
2012	2120	119	310	533	382
2013	2159	122	314	544	396
2014	2199	125	318	556	412
2015	2238	128	322	568	428
2016	2278	131	326	580	444
2017	2318	135	331	592	462
2018	2358	138	335	604	479
2019	2399	141	339	616	498
2020	2439	145	344	628	516
2021	2480	148	349	640	536
2022	2520	152	353	652	555
2023	2559	155	358	664	574
2024	2596	158	362	675	592
2025	2632	161	366	687	611

Appendix 3 – Prevalence (continued)

15. Brandon - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1048*	*56*	*171*	*264*	*96*
1990	*1065*	*60*	*174*	*270*	*95*
1991	*1141*	*69*	*183*	*294*	*95*
1992	*1211*	*60*	*185*	*299*	*135*
1993	*1285*	*72*	*196*	*315*	*153*
1994	*1343*	*59*	*205*	*330*	*179*
1995	*1395*	*59*	*211*	*338*	*211*
1996	*1449*	*68*	*225*	*359*	*224*
1997	*1476*	*74*	*223*	*366*	*225*
1998	*1507*	*80*	*229*	*368*	*238*
1999	1568	84	239	382	248
2000	1625	87	248	395	258
2001	1678	90	256	408	267
2002	1729	93	263	420	276
2003	1778	95	270	433	285
2004	1824	98	276	445	295
2005	1867	100	282	457	304
2006	1909	103	287	469	314
2007	1952	106	292	481	324
2008	1993	109	297	493	335
2009	2035	112	301	505	347
2010	2077	115	306	517	360
2011	2119	118	310	530	373
2012	2162	121	315	542	388
2013	2206	125	319	555	403
2014	2251	128	324	569	419
2015	2296	132	329	582	436
2016	2342	135	334	595	454
2017	2388	139	339	609	473
2018	2435	142	344	622	492
2019	2482	146	349	636	512
2020	2531	150	355	649	533
2021	2579	154	360	663	554
2022	2627	158	366	677	575
2023	2674	162	371	691	596
2024	2721	166	377	705	617
2025	2766	169	382	719	638

Appendix 3 – Prevalence (continued)

20. North Eastman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*650*	*35*	*94*	*115*	*92*
1990	*659*	*29*	*94*	*124*	*91*
1991	*709*	*36*	*96*	*130*	*103*
1992	*767*	*34*	*104*	*149*	*121*
1993	*827*	*40*	*103*	*161*	*145*
1994	*871*	*38*	*109*	*164*	*162*
1995	*903*	*35*	*119*	*173*	*175*
1996	*909*	*38*	*123*	*173*	*180*
1997	*944*	*43*	*127*	*184*	*181*
1998	*1008*	*49*	*142*	*189*	*197*
1999	1048	51	144	197	207
2000	1086	54	146	206	217
2001	1123	56	148	215	227
2002	1160	57	150	223	238
2003	1196	59	153	232	250
2004	1233	61	156	241	262
2005	1269	63	159	249	274
2006	1305	65	162	258	288
2007	1342	67	165	267	301
2008	1379	69	168	276	316
2009	1416	71	172	285	331
2010	1454	73	175	294	347
2011	1492	75	179	304	363
2012	1530	78	183	313	381
2013	1569	80	186	322	399
2014	1609	83	190	331	418
2015	1650	86	194	341	438
2016	1690	88	198	350	459
2017	1730	91	203	359	480
2018	1770	94	207	368	501
2019	1810	96	211	377	523
2020	1849	99	215	386	546
2021	1887	101	219	395	568
2022	1925	104	223	403	591
2023	1961	107	227	411	613
2024	1995	109	231	419	635
2025	2028	111	234	426	656

Appendix 3 – Prevalence (continued)

20. North Eastman -High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*650*	*35*	*94*	*115*	*92*
1990	*659*	*29*	*94*	*124*	*91*
1991	*709*	*36*	*96*	*130*	*103*
1992	*767*	*34*	*104*	*149*	*121*
1993	*827*	*40*	*103*	*161*	*145*
1994	*871*	*38*	*109*	*164*	*162*
1995	*903*	*35*	*119*	*173*	*175*
1996	*909*	*38*	*123*	*173*	*180*
1997	*944*	*43*	*127*	*184*	*181*
1998	*1008*	*49*	*142*	*189*	*197*
1999	1049	51	144	198	207
2000	1088	54	146	206	217
2001	1126	56	148	215	228
2002	1165	58	151	224	239
2003	1203	60	154	233	251
2004	1241	61	157	242	263
2005	1279	63	160	252	276
2006	1318	65	163	261	289
2007	1357	67	167	270	304
2008	1397	70	170	280	319
2009	1437	72	174	289	335
2010	1477	74	178	299	351
2011	1519	77	182	309	368
2012	1561	79	186	319	387
2013	1604	82	190	329	406
2014	1648	85	194	339	426
2015	1693	88	199	349	448
2016	1738	91	203	360	470
2017	1784	94	208	370	493
2018	1829	97	213	380	516
2019	1874	100	217	390	540
2020	1919	102	222	400	564
2021	1964	105	227	410	589
2022	2007	108	231	419	613
2023	2050	111	236	429	638
2024	2092	114	240	438	663
2025	2131	117	245	447	687

Appendix 3 – Prevalence (continued)

25. South Eastman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*875*	*42*	*120*	*198*	*93*
1990	*940*	*46*	*126*	*212*	*113*
1991	*1002*	*47*	*132*	*218*	*133*
1992	*1066*	*45*	*138*	*226*	*156*
1993	*1107*	*43*	*143*	*236*	*172*
1994	*1154*	*42*	*149*	*244*	*190*
1995	*1189*	*46*	*149*	*255*	*203*
1996	*1218*	*50*	*156*	*266*	*195*
1997	*1255*	*42*	*168*	*266*	*199*
1998	*1300*	*47*	*181*	*276*	*203*
1999	1349	51	185	288	214
2000	1397	54	188	299	224
2001	1444	57	192	311	236
2002	1491	59	195	322	248
2003	1537	62	199	334	261
2004	1583	63	202	346	274
2005	1628	65	205	357	288
2006	1674	67	209	369	303
2007	1720	68	213	382	318
2008	1766	70	216	394	334
2009	1813	72	220	406	351
2010	1860	74	224	419	368
2011	1907	76	228	431	386
2012	1956	78	233	444	405
2013	2005	80	237	457	426
2014	2054	82	242	470	446
2015	2105	84	247	483	468
2016	2156	86	251	497	491
2017	2207	89	256	510	514
2018	2258	91	261	523	538
2019	2309	93	266	537	562
2020	2359	96	271	550	587
2021	2409	98	276	563	612
2022	2459	100	281	576	637
2023	2507	103	286	588	662
2024	2553	105	290	600	687
2025	2598	107	295	613	711

Appendix 3 – Prevalence (continued)

25. South Eastman - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*875*	*42*	*120*	*198*	*93*
1990	*940*	*46*	*126*	*212*	*113*
1991	*1002*	*47*	*132*	*218*	*133*
1992	*1066*	*45*	*138*	*226*	*156*
1993	*1107*	*43*	*143*	*236*	*172*
1994	*1154*	*42*	*149*	*244*	*190*
1995	*1189*	*46*	*149*	*253*	*203*
1996	*1218*	*50*	*156*	*266*	*195*
1997	*1255*	*42*	*168*	*266*	*199*
1998	*1300*	*47*	*181*	*276*	*203*
1999	1350	51	185	288	214
2000	1400	54	188	300	225
2001	1449	57	192	312	236
2002	1497	60	196	324	249
2003	1546	62	199	336	262
2004	1594	64	203	348	275
2005	1641	66	207	360	289
2006	1690	67	210	373	305
2007	1739	69	214	386	320
2008	1789	71	219	399	337
2009	1839	73	223	412	354
2010	1890	75	227	425	372
2011	1942	77	232	439	391
2012	1994	79	237	452	412
2013	2048	81	241	466	433
2014	2103	84	247	480	455
2015	2159	86	252	495	478
2016	2216	89	257	509	502
2017	2274	91	263	524	527
2018	2331	94	268	539	552
2019	2389	96	274	554	578
2020	2447	99	279	569	605
2021	2505	102	285	583	633
2022	2563	104	291	598	660
2023	2620	107	297	612	688
2024	2675	110	302	627	716
2025	2729	112	308	641	743

Appendix 3 – Prevalence (continued)

30. Interlake - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1558*	*89*	*190*	*314*	*185*
1990	*1598*	*98*	*192*	*330*	*189*
1991	*1705*	*102*	*209*	*353*	*217*
1992	*1805*	*106*	*217*	*373*	*243*
1993	*1890*	*100*	*226*	*393*	*290*
1994	*1996*	*99*	*230*	*426*	*327*
1995	*2075*	*103*	*230*	*450*	*357*
1996	*2110*	*107*	*237*	*464*	*351*
1997	*2181*	*115*	*239*	*476*	*360*
1998	*2240*	*123*	*237*	*486*	*393*
1999	2315	124	249	502	406
2000	2386	125	259	518	419
2001	2453	127	268	533	433
2002	2517	129	277	549	448
2003	2578	132	285	564	464
2004	2636	134	292	579	480
2005	2693	137	299	594	497
2006	2750	140	306	609	516
2007	2807	143	313	624	536
2008	2863	147	319	639	557
2009	2919	150	325	655	579
2010	2976	154	331	671	602
2011	3033	158	336	687	626
2012	3091	162	342	703	652
2013	3150	166	348	719	678
2014	3210	170	354	736	707
2015	3270	174	360	752	736
2016	3331	178	366	769	767
2017	3392	183	372	785	799
2018	3453	187	378	802	832
2019	3512	191	384	818	865
2020	3571	195	390	833	898
2021	3630	200	396	849	932
2022	3686	204	401	864	966
2023	3741	208	407	879	999
2024	3793	212	412	893	1031
2025	3841	216	417	907	1062

Appendix 3 – Prevalence (continued)

30. Interlake - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1558*	*89*	*190*	*314*	*185*
1990	*1598*	*98*	*192*	*330*	*189*
1991	*1705*	*102*	*209*	*353*	*217*
1992	*1805*	*106*	*217*	*373*	*243*
1993	*1890*	*100*	*226*	*393*	*290*
1994	*1996*	*99*	*230*	*426*	*327*
1995	*2075*	*103*	*230*	*450*	*357*
1996	*2110*	*107*	*237*	*464*	*351*
1997	*2181*	*115*	*239*	*476*	*360*
1998	*2240*	*123*	*237*	*486*	*393*
1999	2318	124	249	502	406
2000	2391	125	259	519	419
2001	2461	127	269	535	433
2002	2528	130	278	552	449
2003	2593	132	286	567	465
2004	2655	135	294	583	482
2005	2716	138	301	599	500
2006	2778	142	309	615	520
2007	2840	145	316	631	541
2008	2902	149	323	648	563
2009	2964	153	329	665	586
2010	3027	157	336	682	610
2011	3092	161	342	700	635
2012	3157	165	348	717	662
2013	3224	169	355	735	691
2014	3292	174	362	754	721
2015	3361	179	368	772	753
2016	3431	184	375	791	787
2017	3502	188	382	809	821
2018	3573	193	389	828	857
2019	3644	198	396	846	893
2020	3714	203	403	864	930
2021	3784	208	410	883	967
2022	3853	213	417	900	1004
2023	3920	218	424	918	1042
2024	3986	223	431	935	1078
2025	4048	227	437	952	1114

Appendix 3 – Prevalence (continued)

40. Central - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*2111*	*87*	*296*	*457*	*275*
1990	*2170*	*87*	*294*	*475*	*300*
1991	*2253*	*84*	*300*	*488*	*336*
1992	*2324*	*79*	*321*	*505*	*374*
1993	*2421*	*80*	*328*	*521*	*424*
1994	*2487*	*90*	*338*	*547*	*438*
1995	*2534*	*93*	*351*	*550*	*454*
1996	*2587*	*102*	*359*	*568*	*447*
1997	*2581*	*101*	*387*	*564*	*447*
1998	*2657*	*117*	*390*	*578*	*446*
1999	2752	120	398	596	463
2000	2840	122	406	614	481
2001	2920	125	413	632	498
2002	2993	127	419	650	516
2003	3062	129	424	667	534
2004	3129	132	428	684	552
2005	3192	134	433	701	572
2006	3254	136	437	718	592
2007	3315	139	441	734	613
2008	3374	142	445	750	635
2009	3434	144	449	766	658
2010	3493	147	453	783	682
2011	3554	150	457	800	708
2012	3616	153	462	818	736
2013	3680	156	467	836	765
2014	3746	160	472	854	796
2015	3814	163	477	873	829
2016	3883	167	483	892	863
2017	3954	171	489	911	898
2018	4026	175	495	931	935
2019	4098	179	502	950	973
2020	4171	183	509	969	1011
2021	4244	187	516	988	1051
2022	4316	191	523	1007	1090
2023	4387	196	529	1026	1130
2024	4455	200	536	1044	1168
2025	4521	203	543	1062	1206

Appendix 3 – Prevalence (continued)

40. Central - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*2111*	*87*	*296*	*457*	*275*
1990	*2170*	*87*	*294*	*475*	*300*
1991	*2253*	*84*	*300*	*488*	*336*
1992	*2324*	*79*	*321*	*505*	*374*
1993	*2421*	*80*	*328*	*521*	*424*
1994	*2487*	*90*	*338*	*547*	*438*
1995	*2534*	*93*	*351*	*550*	*454*
1996	*2587*	*102*	*359*	*568*	*447*
1997	*2581*	*101*	*387*	*564*	*447*
1998	*2657*	*117*	*390*	*578*	*446*
1999	2754	120	399	597	464
2000	2845	123	407	615	482
2001	2928	125	414	634	499
2002	3005	128	420	652	517
2003	3078	130	425	670	535
2004	3149	132	431	688	555
2005	3217	135	435	706	575
2006	3284	138	440	724	595
2007	3351	140	445	741	617
2008	3416	143	450	759	640
2009	3482	146	454	777	665
2010	3548	149	459	795	690
2011	3617	152	464	814	718
2012	3686	156	469	833	747
2013	3758	159	475	853	778
2014	3834	163	481	873	811
2015	3911	167	487	894	846
2016	3991	171	494	915	882
2017	4073	176	501	936	921
2018	4155	180	509	958	960
2019	4240	185	516	980	1001
2020	4325	189	524	1002	1043
2021	4411	194	533	1024	1087
2022	4497	199	541	1046	1130
2023	4582	204	550	1067	1174
2024	4666	208	558	1089	1217
2025	4747	213	566	1111	1260

Appendix 3 – Prevalence (continued)

50. Marquette - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1119*	*44*	*153*	*237*	*149*
1990	*1163*	*52*	*159*	*246*	*150*
1991	*1206*	*53*	*172*	*245*	*161*
1992	*1253*	*61*	*179*	*249*	*178*
1993	*1286*	*62*	*179*	*269*	*218*
1994	*1332*	*65*	*190*	*284*	*244*
1995	*1339*	*67*	*195*	*291*	*255*
1996	*1388*	*67*	*211*	*291*	*274*
1997	*1414*	*73*	*214*	*292*	*283*
1998	*1425*	*65*	*217*	*306*	*282*
1999	1455	67	219	314	286
2000	1481	69	221	322	291
2001	1504	70	223	329	296
2002	1525	71	224	336	300
2003	1543	72	225	343	305
2004	1559	73	226	349	309
2005	1574	73	227	355	314
2006	1588	74	227	361	318
2007	1602	75	228	367	324
2008	1616	76	228	373	330
2009	1629	76	228	378	336
2010	1642	77	228	384	342
2011	1655	78	228	390	350
2012	1669	79	228	396	358
2013	1684	80	229	402	367
2014	1701	81	230	408	377
2015	1719	82	231	414	388
2016	1738	84	232	421	400
2017	1758	85	233	427	413
2018	1777	86	234	433	426
2019	1798	88	236	440	439
2020	1818	89	237	446	453
2021	1839	91	239	452	466
2022	1859	92	240	458	480
2023	1879	93	242	465	494
2024	1898	95	244	471	508
2025	1916	96	245	477	521

Appendix 3 – Prevalence (continued)

50. Marquette - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1119*	*44*	*153*	*237*	*149*
1990	*1163*	*52*	*159*	*246*	*150*
1991	*1206*	*53*	*172*	*245*	*161*
1992	*1253*	*61*	*179*	*249*	*178*
1993	*1286*	*62*	*179*	*269*	*218*
1994	*1332*	*65*	*190*	*284*	*244*
1995	*1339*	*67*	*195*	*291*	*255*
1996	*1388*	*67*	*211*	*291*	*274*
1997	*1414*	*73*	*214*	*292*	*283*
1998	*1425*	*65*	*217*	*306*	*282*
1999	1456	67	220	315	286
2000	1484	69	222	323	291
2001	1508	70	224	330	296
2002	1530	71	225	337	301
2003	1551	72	226	344	306
2004	1569	73	227	351	310
2005	1586	74	228	357	315
2006	1602	75	229	364	320
2007	1618	76	230	370	326
2008	1634	77	230	377	332
2009	1650	78	230	383	339
2010	1666	78	231	390	346
2011	1683	79	231	396	354
2012	1700	80	232	403	363
2013	1719	82	233	410	373
2014	1739	83	234	417	384
2015	1761	84	235	424	396
2016	1784	86	237	431	409
2017	1808	87	238	438	423
2018	1832	89	240	446	437
2019	1857	90	242	453	452
2020	1882	92	244	461	467
2021	1908	94	246	468	482
2022	1934	95	249	475	498
2023	1959	97	251	483	513
2024	1985	99	253	490	529
2025	2009	101	255	498	544

Appendix 3 – Prevalence (continued)

55. South Westman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1149*	*48*	*190*	*245*	*136*
1990	*1157*	*51*	*202*	*247*	*138*
1991	*1152*	*42*	*193*	*250*	*152*
1992	*1226*	*47*	*196*	*259*	*184*
1993	*1286*	*51*	*198*	*269*	*209*
1994	*1331*	*58*	*203*	*286*	*224*
1995	*1363*	*57*	*206*	*296*	*240*
1996	*1387*	*49*	*224*	*296*	*238*
1997	*1392*	*48*	*225*	*300*	*235*
1998	*1397*	*49*	*226*	*312*	*236*
1999	1431	54	232	318	243
2000	1459	57	236	324	250
2001	1484	60	239	329	256
2002	1506	62	242	334	263
2003	1524	63	245	339	269
2004	1540	64	247	344	276
2005	1555	65	248	349	283
2006	1568	66	249	353	289
2007	1580	67	250	358	296
2008	1592	68	251	363	303
2009	1603	69	251	367	310
2010	1615	70	252	371	318
2011	1626	71	252	375	326
2012	1637	71	252	380	335
2013	1650	72	252	384	344
2014	1663	73	253	389	354
2015	1677	74	253	393	365
2016	1693	75	254	398	376
2017	1708	77	255	403	387
2018	1725	78	256	408	399
2019	1741	79	257	413	411
2020	1758	80	259	418	424
2021	1775	81	260	423	437
2022	1791	83	261	428	449
2023	1806	84	262	432	462
2024	1820	85	263	437	474
2025	1834	86	264	442	485

Appendix 3 – Prevalence (continued)

55. South Westman - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1149*	*48*	*190*	*245*	*136*
1990	*1157*	*51*	*202*	*247*	*138*
1991	*1152*	*42*	*193*	*250*	*152*
1992	*1226*	*47*	*196*	*259*	*184*
1993	*1286*	*51*	*198*	*269*	*209*
1994	*1331*	*58*	*203*	*286*	*224*
1995	*1363*	*57*	*206*	*296*	*240*
1996	*1387*	*49*	*224*	*296*	*238*
1997	*1392*	*48*	*225*	*300*	*235*
1998	*1397*	*49*	*226*	*312*	*236*
1999	1432	54	232	318	243
2000	1462	58	236	324	250
2001	1488	60	240	330	257
2002	1511	62	243	335	263
2003	1531	64	245	341	270
2004	1549	65	248	346	277
2005	1566	66	250	351	284
2006	1581	67	251	356	291
2007	1595	68	252	361	298
2008	1609	69	253	366	305
2009	1623	70	254	371	313
2010	1638	71	254	376	321
2011	1652	72	255	381	330
2012	1666	73	256	386	339
2013	1682	74	256	391	349
2014	1699	75	257	396	360
2015	1717	76	258	402	372
2016	1735	77	260	408	384
2017	1755	79	261	413	396
2018	1776	80	263	419	409
2019	1797	81	264	425	423
2020	1818	83	266	431	437
2021	1840	84	268	437	451
2022	1860	86	270	443	465
2023	1881	87	272	449	479
2024	1901	88	273	455	492
2025	1920	90	275	461	506

Appendix 3 – Prevalence (continued)

60. Parkland - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1194*	*68*	*170*	*235*	*149*
1990	*1226*	*66*	*177*	*237*	*154*
1991	*1280*	*72*	*194*	*230*	*182*
1992	*1320*	*66*	*196*	*247*	*203*
1993	*1368*	*63*	*196*	*251*	*248*
1994	*1412*	*59*	*198*	*270*	*264*
1995	*1447*	*63*	*206*	*281*	*283*
1996	*1476*	*63*	*200*	*285*	*301*
1997	*1502*	*70*	*208*	*297*	*309*
1998	*1538*	*77*	*221*	*314*	*312*
1999	1574	78	225	320	317
2000	1605	79	229	327	321
2001	1632	80	231	333	325
2002	1654	80	233	339	329
2003	1674	81	234	345	333
2004	1692	82	234	351	338
2005	1708	82	234	356	343
2006	1723	83	234	361	348
2007	1737	84	234	366	354
2008	1750	84	234	371	361
2009	1763	85	233	376	368
2010	1775	86	233	381	375
2011	1788	87	233	386	384
2012	1801	87	233	391	393
2013	1816	88	233	395	403
2014	1831	90	233	401	413
2015	1847	91	233	406	424
2016	1863	92	234	411	436
2017	1880	93	235	416	448
2018	1897	95	235	421	460
2019	1914	96	236	426	472
2020	1931	97	237	432	485
2021	1949	99	238	437	499
2022	1966	100	239	442	512
2023	1983	101	240	447	525
2024	1998	103	241	451	538
2025	2012	104	242	456	549

Appendix 3 – Prevalence (continued)

60. Parkland -High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*1194*	*68*	*170*	*235*	*149*
1990	*1226*	*66*	*177*	*237*	*154*
1991	*1280*	*72*	*194*	*230*	*182*
1992	*1320*	*66*	*196*	*247*	*203*
1993	*1368*	*63*	*196*	*251*	*248*
1994	*1412*	*59*	*198*	*270*	*264*
1995	*1447*	*63*	*206*	*281*	*283*
1996	*1476*	*63*	*200*	*285*	*301*
1997	*1502*	*70*	*208*	*297*	*309*
1998	*1538*	*77*	*221*	*314*	*312*
1999	1576	78	226	321	317
2000	1608	79	229	328	321
2001	1636	80	231	334	326
2002	1661	81	233	341	330
2003	1683	81	234	347	334
2004	1703	82	235	353	339
2005	1721	83	236	358	345
2006	1738	84	236	364	350
2007	1755	84	236	370	357
2008	1771	85	236	375	364
2009	1787	86	236	381	371
2010	1803	87	236	386	380
2011	1819	88	236	392	389
2012	1836	89	236	398	399
2013	1854	90	237	403	410
2014	1873	92	237	409	421
2015	1893	93	238	415	433
2016	1914	95	239	421	446
2017	1935	96	240	427	459
2018	1957	98	242	434	473
2019	1979	99	243	440	486
2020	2002	101	244	446	501
2021	2025	102	246	452	516
2022	2048	104	248	459	531
2023	2071	106	249	465	546
2024	2093	107	251	471	561
2025	2113	109	252	477	574

Appendix 3 – Prevalence (continued)

70. Norman - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*340*	*22*	*32*	*68*	*27*
1990	*343*	*26*	*34*	*70*	*25*
1991	*340*	*23*	*38*	*70*	*24*
1992	*369*	*26*	*42*	*81*	*27*
1993	*385*	*22*	*44*	*82*	*41*
1994	*408*	*23*	*52*	*83*	*56*
1995	*431*	*19*	*59*	*87*	*69*
1996	*444*	*28*	*52*	*96*	*68*
1997	*463*	*26*	*57*	*98*	*65*
1998	*474*	*27*	*58*	*102*	*67*
1999	485	25	58	104	70
2000	497	24	58	106	72
2001	507	24	58	109	75
2002	518	25	58	111	78
2003	529	25	59	114	81
2004	539	26	59	117	84
2005	550	26	60	120	87
2006	561	27	60	124	90
2007	573	28	61	127	94
2008	586	29	62	131	98
2009	598	30	63	134	103
2010	612	31	64	138	108
2011	625	32	65	142	113
2012	638	33	66	146	118
2013	651	34	67	150	123
2014	665	35	69	153	129
2015	678	35	70	157	135
2016	691	36	71	161	141
2017	705	37	72	165	147
2018	718	38	74	169	153
2019	731	39	75	173	160
2020	745	40	76	177	166
2021	758	41	78	181	172
2022	770	42	79	184	179
2023	782	43	80	188	185
2024	793	44	81	191	191
2025	802	45	82	194	196

Appendix 3 – Prevalence (continued)

70. Norman -High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*340*	*22*	*32*	*68*	*27*
1990	*343*	*26*	*34*	*70*	*25*
1991	*340*	*23*	*38*	*70*	*24*
1992	*369*	*26*	*42*	*81*	*27*
1993	*385*	*22*	*44*	*82*	*41*
1994	*408*	*23*	*52*	*83*	*56*
1995	*431*	*19*	*59*	*87*	*69*
1996	*444*	*28*	*52*	*96*	*68*
1997	*463*	*26*	*57*	*98*	*65*
1998	*474*	*27*	*58*	*102*	*67*
1999	486	25	58	104	70
2000	498	24	58	106	72
2001	510	24	59	109	75
2002	521	25	59	112	78
2003	533	25	59	115	81
2004	545	26	60	119	84
2005	557	27	60	122	87
2006	569	28	61	126	91
2007	583	28	62	129	95
2008	596	29	63	133	99
2009	611	30	64	137	104
2010	626	32	65	141	110
2011	641	33	66	145	115
2012	656	34	68	150	121
2013	671	35	69	154	126
2014	687	36	70	158	133
2015	703	37	72	163	139
2016	718	38	73	167	146
2017	734	39	75	172	152
2018	750	40	76	176	159
2019	766	41	78	181	166
2020	782	42	80	185	173
2021	798	44	81	190	181
2022	814	45	83	194	188
2023	828	46	84	198	195
2024	843	47	86	202	202
2025	856	48	87	206	208

Appendix 3 – Prevalence (continued)

80. Burntwood -Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*219*	*16*	*17*	*30*	*16*
1990	*235*	*19*	*16*	*33*	*16*
1991	*248*	*18*	*20*	*37*	*19*
1992	*252*	*17*	*20*	*40*	*16*
1993	*282*	*14*	*23*	*44*	*26*
1994	*293*	*13*	*21*	*45*	*31*
1995	*314*	*18*	*24*	*47*	*35*
1996	*340*	*15*	*28*	*59*	*36*
1997	*358*	*9*	*35*	*60*	*41*
1998	*362*	*11*	*31*	*53*	*40*
1999	373	11	32	56	42
2000	385	13	34	59	45
2001	397	14	36	63	48
2002	411	15	38	66	51
2003	425	16	41	70	54
2004	439	18	43	73	57
2005	453	19	45	76	60
2006	467	20	47	80	64
2007	481	21	48	83	68
2008	496	22	50	87	72
2009	511	22	52	90	76
2010	526	23	54	94	80
2011	541	24	56	98	85
2012	556	25	57	101	89
2013	571	26	59	105	94
2014	585	27	61	109	99
2015	600	27	63	113	104
2016	615	28	64	116	108
2017	629	29	66	120	113
2018	644	30	68	124	118
2019	659	31	70	128	123
2020	673	32	71	132	128
2021	687	33	73	136	133
2022	702	34	75	140	138
2023	716	35	77	143	143
2024	730	36	79	147	148
2025	744	37	80	151	153

Appendix 3 – Prevalence (continued)

80. Burntwood - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*219*	*16*	*17*	*30*	*16*
1990	*235*	*19*	*16*	*33*	*16*
1991	*248*	*18*	*20*	*37*	*19*
1992	*252*	*17*	*20*	*40*	*16*
1993	*282*	*14*	*23*	*44*	*26*
1994	*293*	*13*	*21*	*45*	*31*
1995	*314*	*18*	*24*	*47*	*35*
1996	*340*	*15*	*28*	*59*	*36*
1997	*358*	*9*	*35*	*60*	*41*
1998	*362*	*11*	*31*	*53*	*40*
1999	374	11	32	56	42
2000	386	13	34	60	45
2001	399	14	36	63	48
2002	413	15	39	67	51
2003	428	17	41	70	54
2004	443	18	43	74	57
2005	458	19	45	77	61
2006	473	20	47	81	64
2007	489	21	49	85	68
2008	505	22	51	88	72
2009	521	23	53	92	77
2010	537	24	55	96	81
2011	554	25	57	100	86
2012	570	26	59	104	91
2013	586	26	61	108	96
2014	603	27	62	112	101
2015	619	28	64	116	106
2016	636	29	66	120	111
2017	653	30	68	125	117
2018	669	31	70	129	122
2019	686	32	72	133	128
2020	703	33	74	137	133
2021	719	34	76	142	139
2022	736	36	78	146	144
2023	753	37	80	150	150
2024	770	38	82	155	155
2025	786	39	84	159	161

Appendix 3 – Prevalence (continued)

90. Churchill - Low					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*9*	*1*	*1*	*1*	*0*
1990	*8*	*0*	*1*	*2*	*0*
1991	*8*	*0*	*1*	*1*	*0*
1992	*8*	*0*	*1*	*0*	*0*
1993	*7*	*0*	*1*	*0*	*0*
1994	*7*	*0*	*1*	*0*	*0*
1995	*11*	*0*	*1*	*1*	*0*
1996	*12*	*0*	*1*	*3*	*0*
1997	*14*	*0*	*1*	*5*	*0*
1998	*14*	*0*	*1*	*4*	*1*
1999	15	0	1	4	1
2000	17	0	1	4	1
2001	18	0	1	5	2
2002	19	1	1	5	2
2003	20	1	1	5	2
2004	21	1	2	5	2
2005	23	1	2	5	2
2006	24	1	2	6	2
2007	25	1	2	6	3
2008	26	1	2	6	3
2009	27	1	2	6	3
2010	29	1	2	7	3
2011	30	1	2	7	4
2012	31	1	2	7	4
2013	32	1	3	7	4
2014	34	1	3	8	5
2015	35	1	3	8	5
2016	36	1	3	8	5
2017	37	1	3	8	5
2018	38	1	3	9	6
2019	39	1	3	9	6
2020	40	1	3	9	6
2021	41	1	3	9	7
2022	42	1	3	10	7
2023	43	1	3	10	7
2024	44	2	3	10	7
2025	44	2	4	10	8

Appendix 3 – Prevalence (continued)

90. Churchill - High					
Year	Total	Lung	Colorectal	Breast	Prostate
1989	*9*	*1*	*1*	*1*	*0*
1990	*8*	*0*	*1*	*2*	*0*
1991	*8*	*0*	*1*	*1*	*0*
1992	*8*	*0*	*1*	*0*	*0*
1993	*7*	*0*	*1*	*0*	*0*
1994	*7*	*0*	*1*	*0*	*0*
1995	*11*	*0*	*1*	*1*	*0*
1996	*12*	*0*	*1*	*3*	*0*
1997	*14*	*0*	*1*	*5*	*0*
1998	*14*	*0*	*1*	*4*	*1*
1999	15	0	1	4	1
2000	17	0	1	4	1
2001	18	0	1	5	2
2002	19	1	1	5	2
2003	20	1	1	5	2
2004	22	1	2	5	2
2005	23	1	2	5	2
2006	24	1	2	6	3
2007	25	1	2	6	3
2008	27	1	2	6	3
2009	28	1	2	6	3
2010	29	1	2	7	4
2011	31	1	2	7	4
2012	32	1	2	7	4
2013	33	1	3	7	4
2014	35	1	3	8	5
2015	36	1	3	8	5
2016	37	1	3	8	5
2017	38	1	3	9	6
2018	40	1	3	9	6
2019	41	1	3	9	6
2020	42	1	3	10	7
2021	43	1	3	10	7
2022	44	2	4	10	7
2023	45	2	4	10	7
2024	46	2	4	11	8
2025	47	2	4	11	8